TENDER SPECIFICATION NO: TN-22
Package No. JPD/SE/IT&CRP/TN-22

Cost of tender specification Rs. 5000

जयपुर विद्युत वितरण निगम लिमिटेड

To Supply

(I) **2 No. Special Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV**

(II) **4 No. General Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV**

Jaipur Vidyut Vitran Nigam Limited (JVVNL)
Office of Superintending Engineer (IT&CRP)
Near Ram Mandir,
Old Power House Premises, Jaipur
Rajasthan 302006

Contact Details

Contact Person	Superintending Engineer (IT&CRP) JVVNL
Telephone	(0141) 2205383, 2201220
e-mail	seit_jpd@yahoo.co.in
Fax	(0141) 220 1220

Note:The Tender document submitted without depositing tender fee Rs. 5000/- will not be accepted.

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JAIPUR VIDYUT VITRAN NIGAM LIMITED
IT & CRP CIRCLE
TENDER SPECIFICATION NO.TN-22

To Supply

(I) **2 No. Special Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV.**

(II) **4 No. General Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV.**

Important events and dates

S. No.	Event	Date
1	Last date & time of receipt of tender	2.30 pm 24th October 2008
2	Date and time of opening of part A	3.00 pm 24th October 2008

Important Notes

(1) Furnishing of earnest money as per clause 13 of Section I of this specification is essential otherwise the tender will not be accepted.

Earnest Money: : Rs 9 Lacs

(2) Purchase of specification is essential for participation in the tender.
(3) The tender specification TN-22 providing detailed terms and condition and technical details can be obtained from the office of SE (IT & CRP) on payment of **Rs 5000/- (Non refundable)** on any working day by cash / demand draft payable to Accounts Officer [TW], JVVNL, Jaipur.
(4) Validity of the proposals will be up-to 120 days from date of opening of part-a bid or 60 days from the date of opening of price bid whichever is later.
(5) The bidder is essentially required to quote for all the items mentioned in this specification, else the bid will be considered as incomplete. The separate order for individual item will not be placed; the order(s) will be issued to same vendor for all the items under this specification.

SUPERINTENDING ENGINEER (IT&CRP)
J.V.V.N.L., JAIPUR

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Document Summary	
Document Name	**Tender Specification No 22** **To supply** **(I) 2 No. Special Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV** **(II) 4 No. General Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV**
Document Owner	Superintending Engineer - (IT & CRP) Jaipur Vidyut Vitran Nigam Limited, Jaipur
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Total number of pages	107
Annexure	7
Schedules	7

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Bid Details/ Tender Notice

JAIPUR VIDYUT VITRAN NIGAM LIMITED

IT & CRP CIRCLE

TENDER SPECIFICATION NO.TN-22

Jaipur Vidyut Vitarn Nigam Ltd., Jaipur (JVVNL) or any authority designated hereinafter called 'Owner' invites sealed tenders from competent agencies To Supply of

(I) 2 No. Special Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment Suitable for Locating Fault on Low /Medium / High Voltage Power Cables up to 33 KV

(II) 4 No. General Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment Suitable for Locating Fault on Low /Medium / High Voltage Power Cables up to 33 KV

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1. Broad scope of work

To supply of Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV

i. Supply and Installation of 2 No. Special Purpose Cable Fault Locating Systems

To supply Special Purpose cable fault locating system at office spread across the jurisdiction of the Discom.

ii. Supply and Installation of 4 No. General Purpose Cable Fault Locating Systems

To supply General Purpose cable fault locating system at office spread across the jurisdiction of the Discom.

iii. Guarantee and post installation support

All the supplied 6 No. of Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV to have comprehensive onsite Guarantee (inclusive of parts and labor) for 66 months from the date of supply and 60 months from the date of installation. Post installation support as per the given service levels.

Detailed scope of work is explained further in section III of this tender specification document.

iv. Extended Guarantee :

The extended guarantee period shall be for 60 months after expiry of the initial guarantee period of 60 months. The obligation of the supplier during extended guarantee period shall be same as defined in the initial guarantee period.

2. Other information

(i) Period of support

The support is required at onsite for 60 months from the date of commissioning and further 60 months from expiry of the initial 60 months.

(ii) Required Competence

The bidder should have the necessary competence, adequate financial standing, sufficient experience, expertise and related infrastructure for handling contract work of similar nature. The qualifying requirements are given in the section – III, Part –2 of this tender specification.

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(iii) Creation of help desk at HQ level and for providing prompt support at on site

The vendor will be required to establish a help desk to provide prompt services regarding registration of the complaint and generate a complaint number.
The help desk at Discom HQ i.e. at Jaipur will be operational from 9.00 am to 6.00 pm on each working day.

(iv) Bids are to be submitted in two parts

Part- A will contain (i) EMD (ii) supporting documents to ascertain the eligibility / qualification as per the QR requirements of the tender (iii) techno-commercial offer comprising details & design of the proposed system(s) to meet out the work requirement, together with its capabilities along with commercial terms and conditions.
Part- B will contain the financial offer/ rates

(v) Submission of proposals

The proposals are to be submitted in following manner:

Envelope No 1: One small size sealed envelope containing the earnest money / or a copy of the receipt of earnest money (EMD) will be furnished and must be super-scribed as "Earnest Money against TN-22 to be opened on **24th October 2008.**

Envelope No 2: Second suitable medium sized sealed envelope for (i) Qualification Requirement details and (ii) Techno-commercial proposal which must be super-scribed "QR & Techno commercial Bid against TN-22 [Part - A] both to be opened on **24th October 2008.**

The bidders are required to submit the above documents in two copies (one original and other first copy).

Envelope No 3: Third envelope for financial proposal, which must be duly sealed and super-scribed "Financial Proposal against TN-22 [Part-B] not to be opened along with Part- A"

Envelope No 4: All the three envelopes must be covered under the fourth (Main Envelope) and must be super scribed "Bid offer against TN-22 to be opened at 3.00 PM on **24th October 2008.**

(vi) Date and address of submitting the proposals

Last date of submission of proposals is: **24th October 2008** up to 2.30 PM.
The proposals are to be submitted to:

The Superintending Engineer (IT&CRP)
Jaipur Vidyut Vitran Nigam Limited,
Near Ram Mandir, Old Power House Premises,
Jaipur, Rajasthan 302006

(vii) Late proposals

Any proposal (s) received after the scheduled time for submission is liable for rejection.

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(viii) Opening of proposals

The offer will be opened on the same day at 3.00 PM in the presence of the representative (s) of the bidder, if any.

Part – A

JVVNL will open Part-A envelope of the proposals, in the Office of Superintending Engineer (IT&CRP), JVVNL, Jaipur in presence of all bidders or their authorized representatives, who choose to be present.

If the opening date is a holiday, then the bids will be opened on the next working day at the same place and time, unless notified otherwise.

Part – B

The date and time for opening Part-B; the Financial Proposals, will be intimated to the bidders, short-listed by JVVNL in due course. Part-B bid of the proposals, that are not short-listed will not be opened and will be returned to respective bidders. Short-listed bidders (or their authorized representatives) as intimated by JVVNL may attend opening of Part-B Financial Proposal.

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Section – I: Instructions To Bidders

JAIPUR VIDYUT VITRAN NIGAM LIMITED

IT & CRP CIRCLE

TENDER SPECIFICATION NO.TN-22

1. General instructions

i. Jaipur Vidyut Vitran Nigam Limited (JVVNL), or any authority designated hereinafter called 'OWNER' will receive bids in respect of services as set forth in the accompanying specification.

ii. All bids must be prepared and submitted in accordance with these instructions.

iii. The bidder, in his own interest is requested to read very carefully these specifications and the terms and conditions as incorporated in this document/ specification before filling the Bid proposal form.

iv. If bidder has any doubt as to the meaning of this specification or any portion thereof, he shall before submitting the bid, may refer the same to the Superintending Engineer (IT&CRP), Jaipur Vidyut Vitran Nigam Limited, Jaipur in writing well in time before the specified date of opening of bids so that such doubts may be clarified.

v. Submission of the bid shall be deemed to be the conclusive proof of the fact that the Bidder has acquainted himself and is in agreement with all the instructions, terms and conditions governing the specification, unless otherwise specifically indicated/ commented by him in his bid.

vi. Bids submitted after the time and date fixed for receipt of bids as set out in the invitation to bid shall be rejected and returned to the bidders.

vii. The works referred herein will cover the entire scope of the proposal which include commissioning and erection of equipment including the successful completion of performance and guarantee tests which the owner desires to get executed.

2. Introduction

Jaipur Vidyut Vitran Nigam Limited (hereinafter to be referred to as JVVNL) is seeking proposals from the competent and qualified vendors "To Supply (I) 2 No. Special Purpose & (II) 4 No. General Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment Suitable for Locating Fault on Low /Medium / High Voltage Power Cables up to 33 KV."

3. Successful Implementation and Good Performance

Any work if specifically not mentioned but reasonably implied for the successful implementation and good performance of the proposed work is deemed to be included and is to be executed within the ordered price.

4. Objectives of the proposed work

The objectives of the proposed work is

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(i) To provide cable fault locating machine to facilitate to automate the existing processes and to increase the efficiency of the operations JVVNL is automating almost all of its processes and in order to achieve that successfully it looks forward to the services from the most competitive vendor for supply of the fault locating machine having latest fault locating technique as mentioned in the scope of work at the locations mentioned in the tender document

(ii) To ensure continued services JVVNL looks forward to avail the services from competent vendor to provide onsite comprehensive Guarantee on parts and labour for all the items provided

(iii) To ensure that the services offered to the consumers of JVVNL are not adversely affected, JVVNL seeks prompt services for its items

(iv) To improve the productivity, JVVNL looks forward to extend basic fault locating training to its employees .

In order to enable JVVNL to meet aforementioned objectives JVVNL proposes to avail the services of competent agency who will undertake all the activities as mentioned in scope of work.

5. Field conditions

(a) The bidder may in its own interest, before submitting the bid, inspect and examine the area involved and satisfy itself regarding the existing system.

(b) For ascertaining the existing system the bidder may contact the concerned Circle SE of JVVNL. The details of the area to be covered in the scope of the contract are available at Section III Part 1. For any clarification regarding this document the prospective bidder may contact to SE (IT&CRP).

(c) No claim for change in the bid or terms & conditions of the contract shall be entertained on the ground that the conditions are different than what were contemplated.

6. Amendments to bid document

At any time prior to the date for submission of bid as well as up to opening of Part-B price bid, JVVNL may for any reason, modify the bid document by issue of amendment(s) which shall form part of it.

The addenda shall be sent in writing to all the prospective Bidders.

7. Due date extension: Extension to the due date, if considered necessary may be done by JVVNL.

8. Deviation from bid documents

i. The offer must have 'No Deviation' certificate as per schedules 1 & 2 of this tender document

ii. If the bidder has certain deviations, such deviations may or may not be accepted on its merit subject to financial and technical implications.

iii. The bid must include a separate statement indicating all deviations from the bid documents as per format enclosed at Schedule I.

iv. All such deviations must be clearly mentioned in Schedule of Deviation.

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9. Filling of bids

i. Bid must be submitted as per the formats attached / details desired here and all blanks in the tender and the annexure of the specifications must be duly filled in one original and one duplicate copy. The complete forms, annexure shall be considered as part of contract documents in the case of successful bid.
ii. No alteration should be made to form of the tender specification and annexure. The bid must comply entirely with the specifications.
iii. The bid and all accompanying documents shall be in Hindi / English language and shall be signed by a responsible and authorized person. The name, designation and authority of signatory shall be stated in the bid.
iv. Tenders should be filled in only with ink or typed. No bid filled in by pencil or otherwise shall be considered.
v. All additions, alterations and over writings in the bid must be clearly initialed by the authorized signatory to the bidder.
vi. The bidder should quote the prices strictly in the manner as indicated herein, failing which bid is liable for rejection. The rate/ prices shall be in words as well as in figures. This must not contain any additions, alterations, overwriting, cuttings or corrections and any other marking.
vii. The contract awarding authority will not be responsible to accept any cost involved in the preparation or submission of the bids.
viii. Each of the pages of offered documents must have proper page No, Section No. The table of content in the beginning of offer must be mentioned. The offer must be duly hard binded. **In absence of such pattern offer will not be opened.**

10. Documents comprising the bid:

PART A: Part A shall contain the following

(a) Supporting documents to ascertain the eligibility/ qualification as per the Qualification Requirements (QR) of the tender.

The bidder needs to furnish full details about organization's competence, financial strength, details of experience in accordance with the QR specified at Part –2 of Section II. The bidder must submit its proposal along with the following documents

i. Earnest money / receipt of EMD as prescribed in this tender document
ii. Cover letter on company's letter head
iii. Annexure 1 to 7
iv. Schedules 1 to 7
v. Power of Attorney/Board Resolution in favor of signatory of the bid
vi. Documents to ascertain the QR details as per details at Section III Part -II
vii. Other details as called for in the tender specification document or which the bidder may like to highlight
viii. Check list as given in this document.

(b) Techno-commercial proposal in the format given in Schedule IV part A comprising details & design of the proposed deliverables to meet out the

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work requirement, together with its capabilities along with commercial terms and conditions

In this part the bidder will submit full relevant documents substantiating the details provided in the annexure and schedules

i. The bidder will substantiate details of the company (as declared on Annexure – 1) in the form of Certificate of Incorporation, MoU, registration certificate or any other relevant document as the case may be
ii. Help Desk that would be established to undertake the proposed work
iii. Project organization structure
iv. Names of the key resources that would be deployed along with their proposed position
v. CVs of the key proposed resources as mentioned in point (iv)
vi. Audited balance sheet and P&L statement required to ascertain the qualification of turn over
vii. Copies of work order and performance report for the projects undertaken/ in hand (as declared on schedule -5)
viii. Approach and methodology to execute the work
ix. Details of reports (from help desk application) that would be available, generated and submitted to JVVNL

(c) **Entire part A (both the original and the first copy) will be submitted in a hard binded copy else the offer will not be opened and deemed to be non responsive Proposals** submitted in such a way where replacement of papers may be possible (like in the case of spiral binding, stapled, submitted in a box file, tied with strings etc) shall be rejected instantly

(d) **Part B:** Part B shall contain the financial proposal as per Part – 2 of Section IV

11. Format and signing of bid

i. The bidder will submit their proposals complete in all respects with enclosures.
ii. The bid must be signed on each page. The person(s) who sign the bid, should have duly authorized from the bidder with Power Of Attorney, which must accompany the bid.
iii. All pages of the bid, including entries or amendments must be initialed by the person or persons signing the bid.
iv. This tender document must also be attached with the bid signing on all the pages as a token of acceptance of the terms and conditions, except those mentioned in the deviation list.

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12. Bid validity

Bid will remain valid for acceptance for a period of 120 [one hundred twenty] days after the date of initial bid (Part-A) opening or 60 [sixty] days from the date of opening of Part-B bid whichever is later. JVVNL may request for suitable extension.

13. Earnest Money

i. The tenderers shall deposit with the A.O. [TW], JVVNL, Jaipur the amount of **Rs. 9 Lacs** as Earnest Money as specified, by crossed Bank Draft/cash payable to A.O. [TW], JVVNL, Jaipur and obtain a receipt thereof. No other mode of deposit shall be accepted.

ii. Any tender not accompanied with Earnest Money/Crossed Bank Draft shall be rejected and the tender will not be accepted.

iii. In case of unsuccessful tenderers, the Earnest money will be refundable on production of the original receipt within a fortnight after finalization of the tender. In case of successful tenderer(s) the Earnest Money will be taken into account in arriving at the amount of the security cum performance guarantee (as per clause no 3 section 2) if vendor(s) desires to furnish cash security deposit. However if the security cum performance guarantee is furnished through bank guarantee (BG) the EMD will be released consequent to acceptance of such BG.

iv. Request for adjustments/proposals for acceptance of Earnest Money deposits, if any, already lying with the JVVNL in connection with some other tenders/orders shall not be entertained.

v. No interest shall be payable on such Deposits.

vi. The JVVNL reserves the right to forfeit Earnest Money Deposit or a part thereof in circumstances, which according to it indicate that the tenderer is not earnest in accepting/executing order placed under the specification.

14. Cost of specification

The purchase of the specification is essential for participation in the tender. The specification giving terms and conditions and technical data can be obtained from the office of the Superintending Engineer [IT&CRP], JVVNL, Jaipur on any working day by paying Rs. 5000/- (Five Thousand) [non-refundable] in cash or Bank Draft payable to Accounts Officer [TW], JVVNL, Jaipur.

15. Late bids:

Any bid(s) received after the scheduled time for submission is liable for rejection.

16. Bid opening

JVVNL will open Part-A envelope of the bids, in the Office of Superintending Engineer (IT&CRP), JVVNL, Jaipur in the presence of bidders or their authorized representatives, who choose to be present. If the opening date is a holiday, the bids will be opened on the next working day at the same place and time, unless notified otherwise.

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17. Evaluation of techno commercial offer

The evaluation of bids will be made in the following two stages:

A. 1st stage: Qualification Requirement (part 'A')

All the received bids will be evaluated first on the basis of qualification requirement prescribed in Section III, part-2 " Qualification Requirement" of this specification and on the basis of adherence to conditions given in this document.

The bidders who meet all the requirements laid in this section shall be selected for considering/ evaluating the Techno commercial offer. The bidders who do not qualify the QR as per section III, part 2 of this specification and other conditions, shall be considered as "not Qualified Bidder" and no further correspondence in this regard shall be entertained and no clarifications on reasons of not qualifying will be intimated.

It may be noted by the bidders that by merely meeting the qualification requirement does not mean that the bidder has been short listed for opening of financial offer.

B. 2nd stage: Techno Commercial

Techno-commercial details submitted by the bidders would be evaluated with respect to the relevant documents substantiating the details provided in the schedules and annexures.

The approach & methodology, previous experience of the firm, overall strength and capability to handle the work as per scope of work, experience of the key professionals, details of hardware, software, functionalities of the application software (of help desk) and other technical aspects would be evaluated. The objective of evaluation of techno-commercial proposals is to ensure that the bidder has the necessary competence to execute the project successfully and timely.

The bidders who qualify the stage 1 and stage 2 shall be short listed for opening of financial offer.

C. Evaluation of financial offers

The financial offer shall be evaluated to arrive at the lowest price bid. For this purpose all the bids will be compared on the basis of total quoted price for the complete system including all applicable taxes and duties. If any bidder has not quoted the prices of any component of price schedule of this document the same will be loaded as per the highest price received under this bid for such component and the evaluation will be made accordingly.

The bidders may note that JVVNL is not bound to accept lowest financial offer.

18. Clarification or modification of bids

In the course of evaluation and comparison of bids, JVVNL may ask bidders individually for clarification, in writing. No change in the substance of the bid shall be permitted except as required to confirm the correction of any typographical error. JVVNL may modify Part-B of bid document even after opening of Part-A.

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19. Revised Financial Offer

Before opening of original financial offer , JVVNL reserves the rights to ask the bidders probably only to the shortlisted bidders to furnish revised sealed financial offer, instead of opening the original financial offer, on account of any changes (Technical or commercial) to be incorporated in the specifications subsequent to the opening of part-A.
Under such circumstances the original financial offer will not be considered and will be super cede by the revised financial offer.

20. Opening of part B bid

The date and time for opening Part-B Financial Offer will be intimated to the bidders, short-listed by JVVNL in due course. Part-B bid of the bidders, not short-listed shall not be opened and shall be returned to such bidders. Short-listed bidders or their representatives may attend Part-B bid opening.

21. Signing of agreement

The successful bidder will, on receipt of Letter of award from JVVNL enter into a contract with JVVNL by jointly signing an agreement. The draft of the agreement based on the terms sheet, detailed in Section-II and Section-III will be forwarded to the successful bidder for execution. The agreement will be executed within fifteen days thereafter. The person to sign the agreement must be duly authorized by the Bidding entities.

22. Rejection of bids :

The bid may be considered as rejected /non-responsive on account of the any of following reasons:

i. Any action on the part of the bidder to revise the rates/prices and modification in technical or commercial substance of original offer, at their own.
ii. Submission of any supplementary information unless & otherwise asked for at his own instance after the opening of the Bid may result in rejection of the Bid and also debar him from submission of Bid to the NIGAM at least for one year.
iii. The owner reserves the right to accept or reject any bid, and to cancel the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the owner's action.
iv. In case of bidder not furnishing the desired information in the desired format the bid/offer may be rejected/non-responsive
v. In case of loose / spiral-binded / tagged/ box-filed bid the bid /offer may be rejected /non-responsive
vi. In case of bidder not adhering to the format of financial offer given with this document the bid / offer may be rejected / non-responsive.
vii. In case of any foot note or explanatory statement in the financial offer the bid/offer may be rejected/non-responsive
viii. In case of any cover letter with financial offer comprising any supplementary statement or discount or any condition the bid / offer may be rejected / non-responsive
ix. In case of any calculation mistake in the price bid the bid / offer may be rejected / non-responsive
x. In case of any miss apprehension at bidder level which consequent to wrong price bidding , JVVNL reserve the right to reject the bid or take necessary loading / unloading to arrive the correct price as per perception of JVVNL /

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tender specification. Accordingly the bidders are advised to ask to clarify about any mis-apprehension before bidding. No excuse shall be considered in this regard.

xi. The zero priced or null value price bid / bid component, offer may be rejected /non-responsive

23. Signature of bidder

i. The bid must contain the name, address and place of business of the person or persons making the bid and must be signed and sealed by the bidder under his usual signature. The name(s) of all the persons signing should also be typed or printed below the signature.

ii. Bid by a partnership must be furnished with full names of all partners and be signed with the partnership firm name, followed by the signature (s) and designation (s) of the authorized partner (s) or other authorized representative (s).

iii. Bids by corporation/ company must be signed with the legal name of the corporation/ company by the President, Managing Director or by the Secretary or other person or persons authorized to bid on behalf of such corporation/ company in the matter.

iv. A bid by a person who affixes to his signature the word 'President', 'Managing Director' 'Secretary', 'Agent' or other designation without disclosing his principal will be liable to be summarily rejected.

v. Satisfactory evidence of authority of the person signing on behalf of the Bidder will be furnished with the bid.

vi. The Bidder's name stated on the proposal must be exact legal name of the firm.

vii. Overwriting or other changes in the bid documents will bear the initials of the person signing the bid.

viii. Bids not conforming to the above requirements of signing will be disqualified.

24. Understanding and clarifications on documents and specifications

i. The bidder is required to carefully examine the specifications and documents and fully inform himself as to all the conditions and terms matters which may in any way affect the Work or the cost thereof. If any Bidder finds discrepancies or omissions in the specifications and documents or is in doubt as to the true meaning of any part, he shall at once request in writing for an interpretation/clarification by the owner. The Owner, then, will issue interpretation and clarifications as he may think fit in writing. After receipt of such interpretations and clarifications, the Bidder may submit his bid but within the time and date as specified in the Invitation to Bid. All such interpretations and clarifications shall form a part of the specifications and documents, and accompany the bidder's proposal.

ii. Verbal clarifications and information given by the owner or his employee(s) or his representative(s) shall not in any way be binding on the owner.

25. Effect and validity of bid

i. The submission of any bid connected with these documents and specification shall constitute an agreement that the bidder shall have no cause of action or claim, against the owner for rejection of his bid. The owner shall always be at liberty to reject or accept any bid or bids at his sole discretion and any such action will not be called into question and the bidder shall have no claim in that regard against the owner.

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ii. The bids shall be valid for a minimum period of 120 days (One hundred twenty) days from the date of opening of bids or 60 (Sixty) days from the date of opening of price bids wherever is later. Bids mentioning a shorter validity period than specified are likely to be summarily rejected / ignored.

iii. Owner may ask for extension in validity period. The bidder will be at liberty to accept it or not. In the event of non extension of the bid validity, the proposals will automatically be treated as withdrawn.

26. Duties and taxes

i. The work contract tax, Service Tax, Sales tax at concession rate of 4%, excise duty, local taxes, entry tax as applicable / levy-able on the goods procured from outside Rajasthan, levies, and other liabilities of Government, if levy-able in respect of the transaction between the owner and the contractor under the contract on the date of opening of bids (techno-commercial) shall be treated as included in the bid price and no additional payment on this account shall be paid by the Nigam.

ii. Any income tax, surcharge on income tax and other corporate taxes including work contract tax, service tax and entry tax as applicable/ levi-able on the goods procured from outside Rajasthan as attracted under the law, shall be deducted at source, as per the prevailing Govt. rules by payment making authority from each bill. Necessary TDS certificate shall be issued by payment making authority.

iii. Jaipur Vidyut Vitran Nigam Limited is a registered dealer under Rajasthan Sales tax and Central Sales tax Act and is entitled to concessional rate of Central/State sales tax as per rules in force. In accordance to above, the prices of material indicated in B.S.R. (G-schedule) include sales tax at the concessional rate of 4% and therefore for supply of material, the sales tax at actual subject to maximum of concessional rate of 4% shall only be payable. Necessary declaration Form 'C' or prescribed certificate for availing supply of material on concessional sales tax shall be issued by the Nigam on completion of ordered work.

iv. Any statutory variation in existing rates of taxes /duties/ levies/charges during currency of contract will be to Nigam' account. However, for claiming any such statutory variation, the contractor is required to furnish the documentary evidence / proof in support of the same for scrutiny and approval. Any downward variation in above rates of taxes/duties/levies will have to be passed on to the Nigam.

27. Policy for bids under consideration

Bids shall be deemed to be under consideration immediately after they are opened and until such time official intimation of award/rejection is made by the owner to the bidders. While the bids are under consideration, bidders and/ or their representatives or other interested parties are advised to refrain from contacting by any means, the owner and/ or his employees/ representatives on matters related to the bids under consideration, in the event of such happening the bidders proposal may be declared as rejected irrespective of his selection or rejection on the basis of tender conditions. The owner, if necessary, will obtain clarifications on the bids by requesting for such information from any or all the bidders, either in writing or through personal contact, as may be necessary. Bidder will not be permitted to change the substance of the bid after the bid has been opened.

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28. Quantities

The quantities / items indicated in the accompanied schedules are only provisional. Further JVVNL reserves the right to delete / reduce any item / quantity from scope of work. The quantities however may increase as per JVVNL requirement up to 50% of tender quantity.

29. Preliminary examination and evaluation

i. The Owner will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

ii. Prior to the detailed evaluation, the owner will determine the substantial responsiveness of each bid to the bidding document. For purpose of these clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding document without material deviations. A material deviation is one which affects in any way the prices, quality, quantity or delivery period of the equipment or which limits in any way to the responsibilities or liabilities of the bidder of any right of the owner as required in these specifications and documents. The Owner's determination of a bid's responsiveness shall be based on the contents of the bid itself without recourse to extrinsic evidence.

iii. A bid determined as not substantially responsive will be rejected by the owner and shall not subsequently be treated responsive by the bidder by correction of the non conformity by the bidder.

iv. The "Price bids" of the bidders whose "Techno- commercial bid" found in order & responsive and meets, the qualification requirements as specified in the bidding documents, only shall be opened.

v. Bid price shall mean the total price quoted by each bidder for complete package in his proposal for the complete scope of works.

vi. The owner reserve the right to waive any minor infirmity or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any bidder.

vii. The owner will evaluate and compare the bids previously determined to be substantially responsive, pursuant to manner specified above, for each package separately .No bid will be considered if the complete requirements covered in the package is not included in the bid.

30. Award of contract

i. Notification of award of contract will be made in writing to the successful bidder(s) by the owner.

ii. The contract will be awarded to the best qualified and the substantially responsive bidder offering the lowest evaluated bid in conformity with requirements of these specifications and documents and the owner shall be the sole judge in this regard and subject to the provisions of these instructions to bidders and other terms and conditions detailed out in these documents and specifications. A responsive bid is one which accepts all terms and conditions of these specifications and documents without any major modifications. A major modification is one which affects in any way the prices, quality, quantity or delivery period of the equipment or which limits in any way the responsibilities or liabilities of the bidder or any rights of the owner as required in these

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specifications and documents. However, the owner may waive any minor formalities or irregularities in the bid.

iii. The award of contract may be distributed upto three vendors; however the award of contract will be made for complete package i.e. the computer, furniture and the other peripherals. If the contract is awarded to more than one vendor the unit of allocation will be O&M circle.

31. General

i. Purchase of a copy of this specification by the bidder is essential for the consideration of his bid. Only one bid will be accepted against each copy of the specification purchased. This specification is not transferable. The cost of specification will not be refunded under any circumstances.

ii. The bidder shall treat the details of the specification and other Bid documents as private and confidential and shall not reproduce without the written authorization of the NIGAM.

iii. The NIGAM does not bind itself to accept the lowest or any bid or any part of the bid and shall not assign any reason(s) for the rejection of any bid or a part thereof.

iv. The fact of submission of bid to the NIGAM shall be deemed to constitute an agreement between the bidder and NIGAM whereby such bid shall remain open for acceptance by the NIGAM and Bidder shall not have option to withdraw his offer, impair or derogate the same. If the Bidder is notified during the period of validity of bid that his bid is accepted by the NIGAM, he shall be bound by the terms of agreement constituted by his bid and such acceptance thereof by the NIGAM, until formal contract of the same bid has been executed between him and the NIGAM in replacement of such agreement.

v. The successful bidder will have to execute the contract agreement for the proper fulfillment of the contract. In case of ambiguous or contradictory terms and conditions mentioned in the bid, interpretations as may be advantageous to JVVNL may be taken, if satisfactory clarification is not furnished within the prescribed period.

vi. JVVNL will not be responsible for any cost or expenses incurred by the bidder in connection with preparation or submission of bids.

vii. Telex, Telegraphic or Fax bids shall not be acceptable.

viii. JVVNL reserves the right to:

a. Amend the scope of the proposed contract.
b. Reject or accept any bid.
c. Cancel the bid process and reject all applications.
d. Vary the area.

JVVNL shall neither be liable for any action nor be under any obligation to inform the bidders of the grounds for any of the above actions.

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SECTION – II: Terms & Conditions

JAIPUR VIDYUT VITRAN NIGAM LIMITED

IT &CRP CIRCLE

TENDER SPECIFICATION NO.TN-22

The Terms and Conditions of the contract shall prevail and shall be binding on the Agency and any change or variation expressed or impressed howsoever made shall be in operative unless expressly sanction by the JVVNL. The Bidder shall be deemed to have fully informed himself and to have specific knowledge of the provisions under terms and Conditions of this specification mentioned hereunder:

1. DEFINITION OF TERMS:

1.1 In constructing these general conditions and the annexed specification, the following words shall have the meaning here in assigned to them unless there is anything in the subject of context in consistent with such construction.

1.1.1 The "JVVNL" shall mean the JAIPUR VIDYUT VITRAN NIGAM LIMITED represented by Chairman/ Managing Director and shall include their legal personal representative, successors and assignees. The "Customer" or "Owner" or "Purchaser" shall mean "JVVNL".

1.1.2 The "Tenderer"/ "Bidder" shall mean and include one or more persons or any firm or any company or body in corporate who has submitted the tender in response to "Invitation of Tender".

1.1.3 The "Agency"/"Vendor"/ Contractor shall mean the tenderer who's tender has been accepted by the "JVVNL" and shall include the tenderer heirs, legal representative, successors and assignees approved by the purchaser.

1.1.4 The "Chairman/Managing Director" shall mean the Chairman/Managing Director, JVVNL, Jaipur.

1.1.5 The "Engineer" shall mean the Chief Engineer, Dy. Chief Engineer, Superintending Engineer, Executive Engineer, Assistant Engineer, JVVNL, Jaipur or other Engineer or Officer for the time being or from time to time duly authorized and appointed in writing by the customer to act as engineer or Inspector for the purpose of the contract. In case where no such engineer has been so appointed, the word "Engineer" shall mean the JVVNL or his duly authorized representative.

1.2 "Works" mean and include the work or works to be done by the contractor under the contract.

1.2.1 The "Contract" shall mean and include the following:

i) Invitation of tender

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ii) Instructions to tenderers (ITT)
iii) Tender form including schedule of prices
iv) Earnest Money Deposit (EMD)
v) Letter of Intent (LOI) and it's acknowledgement
vi) Security Deposit / Bank Guarantee (SBG)
vii) Formal Work Order (WO)
viii) Guaranteed Test Performance (GTP) and Penalty
ix) General Conditions of Contract (GCC)
x) Special Instructions
xi) Site Conditions,
xii) Specification, specific conditions, schedules and annexure.
xiii) Addenda that may hereafter be issued by the purchaser to the contractor in the form of letter and covering letters and schedule of prices as agreed between the contractor and the purchaser.
xiv) The agreements to be entered into under clause 11 of these General terms & Conditions.

1.2.2 The "Specification" shall mean the specification (this complete Document); specific conditions annexed to the General Conditions, the contract schedule, and the annexure thereto, if any.

1.2.3 The consumer / customer management system is the system for consumers and prospective customers of the Discom

1.2.4 The Month shall mean, English calendar month i.e. period of 31/30 days and week shall mean a period of 7 days.

1.2.5 The "Site" shall mean the place or places named in the contract and include, where applicable, the lands and buildings upon or in which the works are to be executed.

1.2.6 "Letter of Intent" shall mean the customer's letter conveying his acceptance of the tender subject to such reservations as may have been stated therein.

1.2.7 The "Contract Price shall mean the sum named in or calculated in accordance with the provisions of the contract purchase or any amendments thereto.

1.2.8 Formal work order shall mean the customer's letter which will be issued as detailed work order containing detailed terms and conditions of the work and such other particulars which the customer may like to convey to the contractor pending execution of a formal written agreement.

1.2.9 "Writing" shall include any manuscript type written or printed statement under or over signature or seal as the case may be.

1.2.10 The Work "Codes" shall mean the Indian Electricity Act/Electricity Supply act and Indian Electricity Rules and the rules made there under applicable in the State of Rajasthan on the date of letter of intent with such special modification thereof as may be specially stipulated by competent State Authorities i.e. Chief Electrical Inspector of Rajasthan.

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1.2.11 Works importing "PERSON" shall include firms, Companies, Corporations and other bodies whether incorporated or not.

1.2.12 Words importing the singular only shall also include the plural and vice version where the context requires.

1.2.13 Terms and expressions not herein defined shall have the same meaning as one assigned to them in the Indian Contract Act (Act IX of 1872) and falling that in the General Clause Act, 1897).

2. **CONTRACT PERIOD:**

The contract period will remain valid till entire supply and installation of the ordered items and completion of onsite support and comprehensive Guarantee on cable fault locating machine items for a period of **120 months**, from the successful installation of the supplied cable fault locating machine items. The installation will be considered as successful when the vendor runs the system and demonstrates its successful running to the concerned officer in charge / consignee.

3. SECURITY AND PERFORMANCE BANK GUARANTEE /DEPOSIT:

3.1 SECURITY BANK GUARNTEE / DEPOSIT :

A Security Deposit/Guarantee equivalent to 2% (two percent) of value less amount of earnest money deposited, (if vendor deposited security deposit in cash) within 15 days of receipt of work order, in cash or by crossed Bank Draft or by way of Bank Guarantee from any scheduled Bank in the prescribed preformed (In case, vendor furnishes the BG instead of cash deposit the amount of earnest money will be refunded) on a Rajasthan State Non judicial stamp paper of Rs. 100.00 duly authenticated by the issuing Banker.
This Bank Guarantees is to remain valid for a period of 18 months from the date of award of contract in the first instance and may have to be extended if desired. This bank guarantees shall be released after 6 months of complete installation and training.

3.2 PERFORMANCE DEPOSIT/GUARANTEE:

A performance deposit / Guarantee equivalent to 5 % of contract value shall be deposited by the successful bidder either in cash/DD with the Account Officer [TW], JVVNL, Jaipur or in the form of Bank Guarantee from scheduled Bank on non-judicial stamp papers of appropriate value as intimated by JVVNL in the prescribed format addressed to the Superintending Engineer [IT&CRP], JVVNL, for satisfactory work performance within 15 days of receipt of the Detailed Purchase Order. The Bank Guarantee is to be remained valid for a period of 60 months from the date of completion of contract or 69 months from the order whichever is later with a further grace period of six months for lodging the claims etc., if any and may have to be extended if desired.

The above performance Bank Guarantee will be released only after furnishing of bank guarantee equivalent to 5% of the contract value towards extended guarantee period for 60 months, which shall be valid

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for a period for 60 months after expiry of initial performance guarantee period.

It would be preferred that the vendor furnishes the bank guarantee for 60 months period at first instance but if the vendor furnishes the BG for less period (not less than 18 months at first instance) at first instance **it will be the sole duty of vendor to get the BG extended well in time to maintain its validity as desired. JVVNL may invoke the BG without giving any information if validity of BG expires before 5 years**.

3.3 Manufacturer's Warranty :

The offered equipment/ material shall be guaranteed for satisfactory operation for a period of 10 (Ten) years from the date of supply of the equipment. For this purpose you shall furnish Manufacturer's Warranty on Rajasthan State No-judicial Stamp paper worth Rs. 100.00 in the manner detailed at clause 1.41 of "General Condition of Contract".

3.4 The above B.Gs is to be furnished in whole Rupees with validity up-to last day of required calendar month. Bank commission charges or any other charges, if any, shall be to the Contractor's account.

3.5 The Bank guarantee must be from any Nationalized/Scheduled Bank. The vendor may furnish Bank Guarantee on stamp paper of native state provided the vendor shall furnish a certificate of Banker that the stamp duty has been paid as per prevailing rules of that state.

3.6 Unless otherwise specifically required to be retained/forfeited by the NIGAM, the Security deposit shall be refundable on request of the contractor after three months on completion of the entire work to the satisfaction of the NIGAM.

3.7 If the contractor fails or neglect to observe or perform any of his obligation under the contract, it will be lawful for the NIGAM to forfeit either in whole or in part at his absolute discretion, the Security deposit furnished by the contractor.

3.8 If the contractor fails to provide the Security within the period specified, such failure shall constitute a breach of the Contract and the NIGAM shall be entitled to make other arrangements at the risk and expenses of the contractor and the Earnest money deposited by the Contractor shall stand forfeited by the NIGAM.

4 CONTRACTOR TO INFORM HIMSELF FULLY

The contract shall be considered to have come into force from the date of the issue of Letter of Intent / Letter of Award. The contractor shall be deemed to have carefully examined the General Conditions, specifications, schedules and drawings also to have satisfied himself as the nature and character of the work to be executed and where necessary, of the site conditions and other relevant matters and details. Any information thus had or otherwise obtained from the owner or the Engineer shall not be in any way relieve the contractor from his responsibility for the supplying of the plant and equipment and executing the work in terms of the contract including all details and incidental works and supply all accessories or apparatus which may not have been specifically mentioned in the contract but necessary for ensuring complete erection and safe and efficient working of the plant and equipment if he has any doubt as to the meaning of any portion of the general and any special conditions of contract and specifications, he shall before offering his bid proposal, set- forth the particulars thereof and submit them to the Engineer in writing in order that such doubt, misunderstanding, misconceptions, whatsoever could be allied.

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5 CONTRACT DOCUMENTS AND AGREEMENTS

The order placed under this specification shall be governed by the terms and conditions as incorporated in this Specification and as given in the detailed work order and its annexure(s). The terms and conditions as specified in this section if differ from the terms indicated in the detailed work order and its annexure(s) the latter shall prevail. The contract shall for all purposes be construed according to the Laws of India and subject to jurisdiction of Rajasthan Courts only. For the due fulfilment of the contract, the contractor shall execute an agreement in the prescribed form on Rajasthan State Non- judicial stamp paper bearing stamp duty as applicable. The expenses of completing and stamping the contract agreement shall be borne by the Contractor. Such agreement shall be executed and signed by the competent authority of the contractor on each page thereof. The original copy is only to be executed on the stamp paper. The remaining two copies may be executed on simple paper. Such complete agreement form along-with the contract documents together with a 'Power of Attorney" in favour of the Executants shall be required to be returned to the owner within a period of 15 days from the receipt of order duly signed on each page. One copy of the executed agreement duly signed by the purchaser/owner shall be sent to the supplier for his reference. The contract documents shall mean and include the following:

i. Contract agreement along with letter of intent.
ii. Work order and its Annexure.
iii. Complete specifications.
iv. Bid proposal form and its schedules including price schedule and completion schedule
v. Power of Attorney in favour of the signatory on non judicial paper of Rs 100/-

6 CHANGE OF QUANTITY

The owner reserves the right to delete any item from the scope as specified in the accompanying technical specifications, at the time of award of contract or during the execution of the contract. In case any item is deleted from the scope of work, the value of contract will be reduced accordingly.

7 RULES & REGULATIONS

The Agency will also follow the labour regulations and the directions of Government and other authorities enforcing the regulations and comply with any other relevant legislation in force from time to time. The owner reserves the right to place the order for any quantity or extend the Tender quantity.

8 DEDUCTION FROM CONTRACT PRICE

All costs, damages or expenses which the owner may have paid, for which under the contract the contractor is liable, will be claimed by the owner. All such claims shall be billed by the owner to the contractor regularly as and when they fall due. Such bills shall be supported by appropriate and certified vouchers or explanations, to enable the contractor to properly identify such claims. Such claims shall be paid by the contractor within fifteen (15) days of the receipt of the corresponding bills and if not paid by the contractor within the

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said period, the owner may then deduct the amount, from any payment due or becoming due by him to the contractor under the contract or may be recovered by actions of law or otherwise, if the contractor fails to satisfy the owner of such claims

9 COMPLIANCE OF LABOUR LAGISLATION

The tenderer shall discharge its liability of employer/ contractor in respect of personnel to be engaged for service, as said out in EPF and MP Act, 1952 ESI Act, 1948 (in ESI implemented area), workmen's compensation act, 1923 (in non ESI implemented area) contract labour (R&A) Act, 1970, Payment of Wages Act, 1936, Minimum Wags Act, 1948 etc. The tenderer is required to get separate code under the provision of EPF and ESI Acts, if not already taken and deposit the employer's contribution along with employee subscription, as per rule and submit copy of challans at the time of claiming payment, as per clause 28, failing which an amount equivalent to employer's contribution and employees subscription shall be deducted from his each bill and deposited with the concerned authorities. The tenderer shall be solely responsible for any consequences arising out of breach of any legislation.

10 MAINTENANCE OF SYSTEM

The agency shall be fully responsible for maintenance of the cable fault locating system and other items that are supplied by him.

11 INSURANCE

I. The agency at his cost shall arrange, secure and maintain all insurance as may be pertinent to the works and obligatory in terms of law to protect its interest and interest of the JVVNL against all perils detailed herein. The form and the limit of such insurance as defined herein together with the under-writer in each case shall be acceptable to the JVVNL. However, irrespective of such acceptance, the responsibility to maintain adequate insurance coverage at all time during the period of contract shall be of agency alone. The agency's failure in this regard shall not relieve him of any of his contractual responsibilities and obligations. The insurance covers to be taken by the agency shall be in a joint name of the JVVNL and the agency. The agency shall, however, be authorized to deal directly with Insurance Company or companies and shall be responsible in regard to maintain of all insurance covers. Further the insurance should be in freely convertible currency.

II. The contractor shall take necessary insurance against loss, damage, theft, pilferage, fire, accident and damages during transit and installation from stores to site for all the materials/good either belonging to him or issued to him by the NIGAM for the purpose of execution of work. The insurance shall also cover for loss, damage, accidents occasioned by the contractor in the course of operation carried out by him for the purpose of complying with his contractual obligations thereof. The insurance shall cover the entire cost of materials.

III. The insurance as per this specification shall be in the joint names of the JVVNL and the agency so that the JVVNL and the agency are covered for the entire period of contract from the commencement of the contract and shall remain

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valid up to 30 days from the date of handing over all the works completed in all respects JVVNL.

IV. It will be the responsibility of the agency to lodge, pursue and settle all claims (for all the equipment) with the insurance company in case of any damage, loss, or fire and the JVVNL shall be kept informed about it. The losses, if any, will have to be borne by the agency if the claims are not lodged and pursued properly in time or if the insurance company does not settle the same.

V. The agency shall replace the lost/-damaged materials promptly irrespective of settlement of the claims by the underwriters and ensure the work progresses as per the agreed schedule(s).

VI. The agency shall also ensure the following: -

(a) Deductible franchise should be minimum as per insurance rules. In case of any loss to the extent of deductible franchise, the same shall be borne by the agency.

(b) The insurance should be valid from the date of start of work and shall remain valid up to 30 days from the date of maintenance and support for the entire items as in the scope of work to the superintending Engineer (IT&CRP).

12 REMEDY ON AGENCYS FAILURE TO INSURANCE:

If the Agency shall fail to effect and keep in force insurance referred to in clause 11 hereof or any other insurance which he may be required to effect under the terms of contract then the JVVNL may effect and keep in force any such insurance and pay such premium(s) as may be necessary for that purpose and from time to time deduct the amount so paid by the JVVNL as aforesaid from any money due or which may become due to the Agency or recover the same as debt from the Agency.

13 Grafts and commissions etc

Any graft, commission, gift or advantage given, promised or offered by or on behalf of the contractor or his partner, agent, officers, director, employee or servant or any one on his or their behalf in relation to the obtaining or to the execution of this or any other contract with the owner, shall be, in addition to any criminal liability which it may incur, subject of any loss or damage to the owner resulting from any cancellation. The owner shall then be entitled to deduct the amount so payable from any moneys otherwise due to the contractor under the contract.

14 MAINTENANCE OF FACILITIES AND PERSONNEL

FACILITY: The Agency shall maintain all requisite facilities of its own as required to carry out the work as per the specification.

The agency shall also maintain communication equipments like telephone with fax, mobile phone, Internet etc. for interaction with JVVNL and others.

(i) **NODAL OFFICER:** To interact between the Supervisory officer and agency, The Superintending Engineer (IT&CRP), JVVNL, Jaipur will act as a Nodal Officer.

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Similarly, the agency shall communicate the name of the authorized person(s) for each circle that would act as a Nodal Officer(s) from its side.

(ii) **SUPERVISORY OFFICERS:**

The SE (JCC/O&M) of each circle will be the supervisory officers for monitoring the services provided by the agency and they shall be authorised to inspect the work carried out by the agency.

16 NOTIFICATION

JVVNL shall inform all its officers the details of agency (CLSC address, names of the contact person, their mobile number, web site of the agency etc) on its part to take best use of the agency

17 CONTRACT AGREEMENT

The agency will have to enter into an agreement with JVVNL to be known as "Contract Agreement" setting out all terms, and conditions including those mentioned in this terms & conditions for the proposed work.

The agreement shall set out specific events of default that will entitle the innocent party to terminate the agreement. The party committing an event of default, which is capable of being remedied, will be given a reasonable opportunity to remedy the default.

The agreement can however be otherwise terminated by either party by giving six-month notice and on terms to be mutually agreed which may include payment of suitable compensation for losses suffered by the other party due to such termination. These terms shall be included in the Contract Agreement.

Agency shall indemnify JVVNL against any claims, demands, costs and expenses whatsoever which may be made against it, because of failure of the Agency or its representatives in the performance of their duties and negligence, any accident or injury to any person.

18 FALL BACK ARRANGMENT

In the event of failure of the agency to fulfill its obligations, duties and responsibilities as per the agreement terms, JVVNL shall interalia have the right, at any time to resort to fall back arrangement. Under this plan, JVVNL shall take charge of all facilities and systems whether in operation or under execution after giving suitable notice as provided in the agreement and can recover from the security deposit the losses suffered due to such failure. If the security deposit is insufficient, the Agency shall pay the difference to JVVNL failing which JVVNL shall have right to recover the sum through legal or other means.

The JVVNL shall have the right in such circumstances to manage the system itself after taking charge of the facilities as above or through any other agency as it may deem fit and no claim of Agency for compensation in this respect shall be entered. This provision shall be made in the agreement.

19 GOVERNING LAWS AND JURISDICTION

The Indian Law shall govern the agreement. Only appropriate courts in Jaipur shall have exclusive Court Jurisdiction to deal with any matter arising out of or relating to the agreement or otherwise.

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20 JURISDICTION FOR LEGAL PROCEEDINGS

The contract shall be governed by the laws of India for the time being in force and be subject to the court of competent jurisdiction at JAIPUR CITY (RAJASTHAN) INDIA. All disputes, differences questions whatsoever arising between the JVVNL and the agency upon or in relation to or in connection with the contracts shall be deemed to have arisen at JAIPUR CITY only and no court other than court at Jaipur, Rajasthan shall have jurisdiction to entertain or try the same.

21 SETTLEMENT OF DISPUTES

In any time any question, dispute or difference what so ever which may arise between the JVVNL and the agency, the same shall be decided by the CMD, JVVNL, Jaipur or by the settlement committee constituted by him and shall be final and binding on both the parties.

The JVVNL has constituted settlement committee to settle the disputed cases. For the disputed amount up to Rs. 2.5 Lac the case may be referred to the CE level settlement committee and if the disputed amount is more than Rs.2.5 Lac the case shall be referred to the corporate level settlement committee. The non refundable fees for referring the case to the settlement committee are as given below or prescribed time to time:

i) Reference fee for CE level settlement committee - Rs.300/-
ii) Reference fee for corporate level settlement committee-Rs.3000/-
iii) Fee for review of cases by corporate level settlement committee- Rs 5000/-
The settlement committee fees as shown above or prevailing at that time shall be deposited in cash with the AO(---).

22 CONDUCT OF AGENCY'S STAFF

If any of the Agency's employees shall in the opinion of JVVNL is guilty of any misconduct or incompetence or negligence, then if so directed by JVVNL, the Agency shall at once remove such employee and replace him by a qualified and competent substitute. It is being clarified that the vendor will have to deploy its manpower who will posses highest degree of integrity and will at no time keep data / database / corporate information under their possession. While attending to the IT complaints, the vendor's personnel will not access any data.

23 LIEN

In case of any lien or claim pertaining to the work and responsibility of the agency for which JVVNL might become liable, it shall have right to recover such claim amount from the agency.

24 TENDER FORMS AND ACCEPTANCE OF TENDER

Each tenderer must prepare and submit his tender strictly according to the procedure laid down in the instructions to tenderer annexed herewith. The tenderer may if he deemed it essential submit in the envelope with his tender

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short and concise memorandum or any letter accompanying the tender as to form part of the tender. Any tenderer wishing to submit descriptive matter for consideration must enclose it in a separate envelope marked and addressed in the same manner as the tender with the addition of the word "descriptive matter".

The purchaser is not bound to accept the lowest tender or any tender or assign any reason for the rejection of a tender. The purchaser also reserves the right to either call for fresh tenders or to accept either the whole or a part of tender or to place orders for any increased or decreased quantity on the basis prices quoted.

25 FORCE MAJEURE CONDITIONS

If at any time during the currency of the contract the performance in whole or in part be prevented or delayed by reason of any war hostility acts of public enemy, civil commotion, sabotage, fire floods, explosion, epidemics, quarantine restrictions, strikes, lockouts or acts of God (hereinafter referred to as Events) then provided Notice and adequate proof of the production/dispatch having suffered on account of these events is given within 21 days from the date of occurrence thereof the provision of penalty Clause of this specification shall not be invoked by the purchaser provided further that the deliveries under the contract shall be resumed, as soon as practicable after such event (s) has ceased to exist and the decision of the purchaser as to whether the deliveries have been so resumed or not shall be final and conclusive provided further that in case the strike/lockout prolongs beyond a period of seven days, the supplier shall immediately inform about to the purchaser in which case the purchaser reserves the right to procure the material equipment on order or part thereof from any other source at the risk and cost of the supplier.

26 CONTRACTOR'S DEFAULT

I. If the contractor shall neglect to execute the works with the diligence and expedition or shall refuse or neglect to comply with any reasonable orders given to him, in writing by the nodal officer/ representative of Discom in connection with the works or shall contravenes the provisions of the contract, the owner may give notice in writing to the contractor make good the failure, neglect or contravention complained of. Should the contractor fail to comply with the notice within thirty (30) days from the date of service thereof, then and in such case the owner shall be at liberty to employ other workmen and forthwith execute such part of the works as the contractor may have neglected to do or if the owner shall think fit, it shall be lawful for him without prejudice to any other right he may have under the contract, to take the works wholly or in part out of the contractor's hands and re-contract with any other person or persons complete the works or any part thereof and in that event the owner shall have free use of all contractor's equipment that may have been at the time on the site in connection with the works without being responsible to the contractor over the same, and the owner shall be entitled to retain and apply any balance which may be necessary, the payment of the cost of executing the said part of the works or of completing the works as the case may be. If the cost of completing the works or executing a part thereof as aforesaid shall exceed the balance due to the contractor, the contractor shall pay such excess. Such

payment of excess amount shall be independent of the liquidated damages for delay, which the contractor shall have to pay if the completion of works is delayed.

II. In addition, such action by the owner as aforesaid shall not relieve the contractor of his liability to pay liquidated damages for delay in completion of works. The termination of the contract under this clause shall not entitle the contractor to reduce the value of the performance bank guarantee nor the time thereof. The performance guarantee shall be valid for the full value and for the full period of the contract including guarantee period.

27 COMPLETENESS OF CONTRACT

The equipment shall be complete in every respect with all mountings, fittings, fixtures and standard accessories normally supplied with such equipment even though not specifically detailed in the specification unless included in the list of excluded items. The contractor shall not be eligible for any extra payment in respect of such mounting, fittings, fixtures and standard accessories etc. Which are needed for the safe operation of the equipment as required by applicable codes only as per contract, through and they may not have been included specifically in the contract.

28 INSPECTIONS AND TESTING

I. All the cable fault locating machine and other system which will be supplied and installed shall undergo pre installation inspection by JVVNL. **Before supply of items, clearance from JVVNL is required. The agency will have to request JVVNL in writing for inspection and testing.**

II. The designated officer/ representative of Discom shall on giving seven days, notice in writing to the contractor setting out any grounds of objections which he may have in respect of the work, be at liberty to reject any drawing and all or any plant, or workmanship connected with such work which in his opinion are not in accordance with the contract or are in his opinion defective for any reason whatsoever.

III. The tenderer shall state in his tender the places of manufacture testing and inspection of various equipments offered by him. Unless specifically provided otherwise all tests shall be made at the contractor's works before shipment

IV. The vendor shall intimate at least 15 days in advance through notice(s) about the readiness of material for dispatch commensurate with specific delivery schedule so as to enable the purchaser to depute his representative for inspection testing and checking of the material/equipment. For this purpose the date of receipt of the letter in the office of the purchasing authority shall be deemed as the date of call for inspection and not the date mentioned in the letter and the date of dispatch. In case, material/equipment is not found ready by the representative of the purchaser deputed for inspection to with tolerance of (-) 10% or if the inspection is not got carried out by any, the extent of the quantity indicated in the inspection call reasons on account of the supplier an amount of Rs.1500/- only for the supplier's work located in Rajasthan and an amount of Rs.1000/- only for the Supplier's works located outside Rajasthan will become payable by the supplier on this account to the Accounts Officer(TW), JVVNL, Jaipur. The supplier will deposit the amount with the Account Officer (TW), JVVNL, and Jaipur immediately under intimation to this

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purchasing authority, failing which the subsequent call for inspection shall not be entertained.

V. In all cases where the contract provides for tests, whether at the premises of works of the contractor of any sub or contractor, test at site the contract or except where otherwise specified shall provide free of charge of the purchaser, such lab our, materials electricity fuel water, stores apparatus and instruments as may reasonably be demanded to carry out efficiently such tests of the plant, in accordance with the contract and shall give facilities to the engineer of his authorized representative to accomplish such testing.

VI. The purchaser reserve to him the right of having any inspection of special test of a reasonable nature at contracts premises or at sites in addition to those prescribed in applicable standards and the enclosed technical specification.

VII. The vendor shall also furnish the latest calibration certificate of the testing instruments/equipment used for the testing of the materials/equipments as covered in the purchase order, to the inspecting officer. The supplier from time to time from the manufacture of the testing instruments should be calibrated the testing instruments/machines or any Govt. recognized testing laboratory. The calibration certificate should not in any case, be older than one year at the time of presenting the same to the Inspecting Officer. In case however, the supplier fails to comply with the conditions as aforesaid, a certificate in writing of the inspector/representative of the purchaser that the supplier has failed to provide the facilities shall be conclusive.

VIII. Unless the inspection is specifically waived no material shall be dispatched without inspection and clearance for dispatch by the purchase's representative.

IX. The purchaser reserves the right to reject all or any part of the material being manufactured of awaiting dispatch, due to any defect or deviations from the standard specifications prescribed as observed during the Inspection. In case of any dispute/difference in this regard the decision of the Chief Engineer shall be final and binding.

X. The purchaser also reserves the right to get the material/equipment tested in any recognized Government Laboratory & claiming any compensation or rejecting the material/equipment, if not found in accordance with the specification. All charges consequent to such rejection and replacement/rectification shall be borne by the supplier.

29 SALES-TAX / Service Tax : The payment of State Sales tax / Service tax/Central Sales tax / Service tax shall be made only on furnishing the following certificate, which may be affixed on the bills preferred, or the material Supplied.

SALE TAX / SERVICE TAX CERTIFICATE

i) Certified that the goods on which sales tax / Service tax / Service tax has been charged have not been exempted under the central sales-tax act / state sales-tax act / Central Excise Tax act and that the charges on account of sales-tax on these goods are correct under the provisions of the relevant act or the rules made there under and that in case of supplies against regular contract, the relevant contractor also includes a specific provisions that the sales-tax is payable by the J.V.V.N.L.

ii) Certified further that we----------are registered as dealers in the state of----------under registration No.----------for the purpose of Central/State Sales-Tax/ Central Excise Tax.

iii) Certificate for RST as per Rajasthan Sales tax / Service tax Act and (c) form(s) as per Central Sales-Tax Act will be issued by the Account Officer (Proc.1), JVVNL, Jaipur to the supplier on his request on completion of the entire supplies under order and on furnishing the copies of the relevant invoices together with the above declaration certificate.

iv) In no circumstances certificate for RST and "C" form shall be issued along with letter of acceptance/purchase order and shall not be demanded by the supplier through bank on presentation of the dispatch documents.

v) In case the sales-tax assessment of the supplier(s) become due become completing the entire supplies against the order, certificate for RST and C Form (s) for the supplies made shall be issued on specific request of the supplier made at least 10 days before the due date of sales-tax assessment on fulfilling the requirement of sub Clause(s)

30 MODE OF PAYMENT

The invoices shall be correctly prepared in quadruplicate in the name of consignee(s)/ designated officer and shall be submitted as under:

I. The A.O. after receiving the verified bills from the officer designated, will arrange the payment accordingly**.**

II. Following documents shall be submitted along with the invoice

a. A certificate/undertaking to the effect that proof of excise duty/ Service charges at actual as has been claimed and other relevant documents for reimbursement of charges paid by the supplier on behalf of the purchase, have been enclosed with the original invoice.

b. Manufacturer's /Contractor guarantee certificate for quality and genuine certificate (one time only).

c. Acceptance letter of contract agreement, BGs and clearance from SE (IT&CRP) about commencement of payment (one time only).

31 TERMS OF PAYMENT

The terms of payment shall be as under :

(a) 90% (ninety percent) payment of each consignment with taxes and duties shall be made against presentation of receipted challans (duly verified by consignee) which shall be submitted to the Accounts Officer(CPC), JVVNL, Jaipur. 90% payment shall be released after completing the following contractual formalities :

(i) Acceptance of Security Bank Guarantee @ 2% of the contract value on Rajasthan State non-judicial Stamp Paper of Rs.100/- or Registration of Suppliers in appropriate/applicable category.

(ii) Acceptance of Performance Bank Guarantee @ 5% of the contract value on Rajasthan State Non-judicial Stamp Paper of Rs.100/-).

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(iii) Acceptance of Contract Agreement.
(iv) Manufacturer's Guarantee & acceptance thereof.
(v) Excise Duty Certificate and Sales Tax Certificate.
(vi) If a firm supplying material to the Nigam or executing any work by obtaining finance from bank by way of discounting of the bills, in such cases Nigam shall not at all be responsible for arranging payments to the banks nor shall bear any liability towards the bank in such cases.

ALTERNATIVELY

(b) In case you do not furnish the performance bank guarantee @ 5% of the contract value, 85% payment shall be made against receipted challans on your request. Even for claiming such payment, furnishing of 2% (two percent) contract value Security Bank Guarantee/Vendor Registration valid for a period up to 3 months after receipt of last consignment of material and other contractual formalities are pre-requisite conditions and in absence of these the Accounts Officer(CPC), JVVNL, Jaipur shall not release the payment. However, if you are not in a position to furnish the security bank guarantee/registration, you shall deposit an amount equivalent to 2% of the contract value in cash towards security deposit or get deducted the same from your first supply bill/bills to be presented to the Accounts Officer(CPC), JVVNL, Jaipur for payment against this order.

(c) The balance 10% payment of clause 1(a) shall be released on production of satisfactory installation & commissioning report of cable fault locator duly verified by the Nodal Officer/Asstt. Engineer concerned).

(d) The bank commission charges, if any shall be borne by the supplier.

32 SUSPENSIONS OF WORKS

The purchaser shall not be liable to pay the contractor any compensation whatsoever arising from suspension or for idle labour.

33 DEATH BANKRUPTCY ETC.

If the contractor shall die or dissolve or commit any act or bankruptcy or being a corporation commence to be wound up except for reconstruction purpose or carry on hits, business under a receiver, the executors successors, or other representatives in law of the state of the contractor or any such receiver,. Liquidator, or any persons to whom to the contract may become vested shall Forth with given notice thereof in writing to the purchaser and shall for one (1) month during which he shall take all reasonable steps to prevent stoppage of the work have the option of carrying out the contractor subject to his or their providing such guarantee as may be required by the purchaser but not exceeding the value of the work for the time being remaining relieve unexecuted provided however that nothing above said shall be deemed to relieve the contractor or his successors of his or other their obligations under the contract under any circumstances. In the event of stoppage of the work the period of the option under this clause shall be seven (7) days only. Provided that, should the above option be not exercised, the contract may by terminated by the purchaser by notice in writing to the contractor and the same power and provisions reserved to the purchaser in clause 1.4 in the event of taking the work out of the contractor’s hand’s shall immediately become operative.

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Change of name of the tenderer/supplier at any stage after tendering, the purchaser shall deal with the contractor only in the name and at the address under which he has submitted the tender. All the liabilities/responsibilities for due execution of the contract and if in circumstances he shall be relieved of any obligation under the contract. The purchaser may, however at his description deal with Agents / Representatives / Distributors / Manufacturers / Associates Principals / Sister Concerns and such dealing shall not absolve the supplier(s) from his responsibilities/obligations/liabilities so the purchaser under the contract. Any change/alteration of name/constitution/organization of the supplier shall be duly notified to the purchaser, and the purchaser reserves the right to determine, the contract, in case of any such notification in the event of such determination the purchaser may effect the purchase of the material not supplied from elsewhere at the risk and cost of the tenderer/supplier

34 GUARANTEE:

The entire system including cable fault locating machine should be guaranteed for satisfactory operation and good workmanship at least for a period of **60 months** from the date of successful installation of cable fault locating machine. Successful tenderer shall furnish documents related to the hardware and license certificates of the standard software an undertaking for the above.

Extended Guarantee :

The extended guarantee period shall be for **60 months** after expiry of the initial guarantee period of 60 months. The obligation of the supplier during extended guarantee period shall be same as defined in the initial guarantee period.

35 FAILURE TO EXECUTE THE CONTRACT

Contractor failing to execute the order placed on them to the satisfaction of the Nigam under terms and conditions set forth therein, will be liable to make good the loss sustained by the Nigam, consequent to the placing of fresh orders elsewhere at higher rate, i.e. the difference between the price accepted in the contract already entered into and the price at which fresh orders have been placed. This is without prejudice to the imposition of Liquidated Damages and forfeiture of security deposit.

36 NON- ASSIGNMENT

The supplier shall not assign or transfer the contract or any part thereof to any agency/ personal during the currency period.

37 EFFECTING RECOVERIES

Any loss, arising due to non-fulfillment of this contract or any other contract, will be recovered from the Security & Performance Deposit/ Guarantees held and or any other amount due to the supplier from the Nigam from this Contract as well as from other contracts.

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38 RESPONSIBILITY

The tenderer is responsible for safe delivery of the materials at the destination stores. The tenderer should include and provide for packing and secured protection of the materials so as to avoid damages or loss in transit before installation or during this contract period if required at any time at the contractors cost.

39 ACCEPTANCE OF CONTRACT

The successful bidder will be forwarded three sets of work order, two of which will be signed (each page) by him/his authorized representative in token of his accepting the contract and returned to the authority placing the order within 15 days of its issue, failing which, his EMD is liable to be forfeited.

40 DELAY IN DELIVERY/LIQUIDATED DAMAGES AND PENALTY

The following penalties shall be applicable

i. Delay in supply & installation: 1/2% of item (unit) cost per week and part thereof. If delay is more than 1 month in the commencement of supply than the work order may be cancelled. Total penalty will not exceed 10% of the unit item cost. The date of scheduled commencement specified in the work order shall be reckoned for the purpose of cancellation of penalty.

ii. If complaint is not rectified within 72 hours of the complaint being registered, then Rs 1000/= per day subject to maximum of 25000/= will be levied by JVVNL. In case of fault not being rectified for 72 hours then the vendor shall arrange to supply an alternate/standby system at the site.

41 REPLACEMENT OF DEFECTIVE/DAMAGED MATERIALS:

Not withstanding anything contained in the above liquidated damages clause when the whole or part of the supplied by the supplier are found to be defective/damaged or are not in conformity with the specification or sample, such defects or damages in the materials / equipments installed shall be rectified within 72 hours from the date of intimation/ information from the system of defect/damage either at the point of destination or at the supplier's works, at the cost of supplier, against proper security and acknowledgement. If the defects or damages are not rectified or replaced within this period, the vendor shall pay a sum towards liquidated damages as per liquidated damages clause given above, for the delay in rectification/replacement of the defects or damages. Though all substations are manned by Nigam employees/staff, the substation attendant of the utility shall ensure the proper upkeep of the system at field; however, contractor shall monitor the same for operational defects.

42 COMPLETENESS OF PROPOSAL:

The tender should be complete with all details of illustrative and descriptive literature and drawings. The tenderer shall furnish the complete technical

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details of the equipment. Information regarding the country of manufacture or origin of materials used in the manufacture of the articles should be furnished. The proposal should include all minor accessories even though not specifically mentioned in this specification but which are essential for the complete functioning of the entire work as specified in the scope of the work. The tenderer shall not be eligible for any extra charges in respect of such minor accessories though not included in the tender and shall be handed over to JVVNL on the expiry/ termination of the contract.

43 CLIMATIC CONDITIONS:

The system are for use in Jaipur Discom and should be satisfactory for operation under tropical conditions in the area of Jaipur Discom and shall be able to maintain the desired output and withstand a wide range of temperature & climatic experience in Jaipur city.

a) The ambient temperature will be within the range of -5 Degree Centigrade to + 55 Degree Centigrade.
b) The altitude will be less than 500 meters.
c) The maximum & minimum atmospheric humidity will be in the range of 95% & 10 % respectively.
d) Average Number of thunderstorm days per annum is 65.
e) Average Number of dust storm days per annum is 15.
f) Average Number of rainy days per annum is 65.
g) Average annual rainfall is 100 cm.
h) The climatic conditions are prone to wide variation in ambient condition and equipments offered under this specification shall be suitable for installation at any of the location in Jaipur.

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SECTION-III PART-II General Information

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SCHEDULE OF REQUIREMENT

1. **GENERAL INFORMATION AND GEOGRAPHICAL AREA UNDER SCOPE:** There are about 160 Sub-Division in the jurisdiction of JVVNL comprising 8 O&M circles spread in the geographical area of 12 districts. The vendor has to supply and install the equipments under this tender to Jurisdiction area of the Jaipur Discom.

SECTION-III-PART-II Pre Qualification Requirements

JAIPUR VIDYUT VITRAN NIGAM LIMITED

IT & CRP CIRCLE

The bidder must possess the following qualifying requirements for successful participation in the tender along with relevant documentary evidence supporting each qualifying requirement without which the offer shall be considered non-responsive and shall be rejected.

I. Mode of Bidding Single party / Consortium

The proposal may be submitted by an individual firm (single party) meeting all the requirements or by a valid consortium of not more than 2 parties.

If the bidder forms a Joint Venture / Consortium, the qualification requirement mentioned specifically for lead member should be met by the lead member entirely and these shall not be collectively evaluated for ascertaining the qualification requirement.

Original consortium agreement on Non – Judicial stamp paper of Rs. 100/- stamp value must be submitted along with the proposal.

The JV agreement / consortium agreement must have the following:

(a) Names of all partners

(b) Name of the lead member

(c) Authorization in favour of the lead member from all the members. (A separate power of attorney signed by legally authorized signatories of all the partners is required)

(d) The lead member is authorized to incur liabilities and receive instructions for and on behalf of any and all partner of the Joint Venture / Consortium

and the entire execution of the contract including payment shall be done exclusively with the lead member

(e) All partners of the Joint Venture / Consortium shall be liable jointly and severally for the execution of the contract in accordance with the contract terms

(f) In the event of any default by any partner / partners of Joint Venture / Consortium, the other partner / partners shall accept the liability and execute the contract in full.

(g) The agreement must provide details of roles and responsibilities of each member of the consortium. Overall responsibility in respect of execution of tendered work is with the lead member.

(h) The Joint Venture / Consortium agreement shall not be cancelled or amended unilaterally without consent of the purchaser after opening of the bid and a statement to this effect should appear in the JV agreement.

(i) A firm can submit only one bid in the same bidding process, either individually as a bidder or as a partner of a Joint Venture / Consortium. A bidder who submits or participates in more than one bid will cause all the bids in which the bidder has participated to be disqualified.

(j) Bids from agents are not acceptable in the case of Joint Venture / Consortium, and such bids will be treated as non-responsive.

(k) The change in consortium /JV after opening / submission of tender shall not be entertained, in the event the consortium / JV is altered then such proposals shall be treated as rejected.

NOTE:

I. In case of non-furnishing of original consortium/ JV agreement along with the bid the bid will be considered as bid without consortium and evaluation shall be made on the basis of credentials of lead member only.

II. The JV/ consortium agreement should be tender specific i.e. signed specifically for this tender.

III. General MOU/ MOA already existing or signed before January 2008 will not be considered.

IV. The JV and Consortium shall be considered at par.

II. Relevant Experience :

1. Equipment shall be from the reputed manufacturer who has proven track record/credential for the offered equipment meeting specified technical parameters in an Indian environment by supplying min 5 Nos. of similar cable fault locating equipments in any one of the last Three years to Indian Public Sector Undertaking / Electrical Utilities/ Govt. Companies. Necessary documents shall be invariably enclosed along with the bid.

2. The vendor must be an original equipment manufacturer (OEM) of the cable fault locator having support network in India. The vendor not manufacturing the main sub-component / modules of the fault locator shall not be considered as OEM.

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OR

The vendor must be an authorized agent / representative of the Original Equipment Manufacturer (Documentary evidence from Original Equipment Manufacturer for the same shall be enclosed) and should have support network in India.

3. The bidder should be a Manufacturer/Sole Distributor/Sole Selling Agent/ Authorized Dealer of offered Item.
4. In case bidder is authorized representative, service centre of the manufacturer should be located in India for after sale service support and documentary evidence with address/ contact details of service centre to this effect from the original manufacturer shall be enclosed with the bid.
5. All the equipments/ modules of fault locating system should be manufactured by the single Original Equipment Manufacturer(OEM).
6. The bidder should have designed, manufacturer/ assembled, tested and supplied to utility/ Doscoms/ Govt. Department at least 5 (FIVE) in last three years i.e from 20005-06, 2006-07 & 2007-08. (For quantity verification C.A. certificate should be furnished)
7. The Bidder is required to quote for minimum 50% of the tendered quantity, failing which the offer may be considered Non-responsive.
8. Min. 50% of the quantity quoted/offered based on similar technology shall be in good working condition from last 3 years and necessary references, documentary evidences shall be invariably enclosed along with the offer.
9. All after sales service facility shall be available in India towards offered equipment. Documentary evidences towards this like Work Orders towards repair, AMC copies, Performance Certificates after repair, delivery challan etc. indicating complete details of the user shall invariably enclosed along with the offer.
10. Offers from the venders quoting as authorized representative of manufacturer can be considered provided the authorized representative have more than 05 years of associations with the same manufacture and authorized representative meets the above requirement in full including credentials and availability of after sales service facility. In such case, the manufacturer shall furnish legally valid authorization in original assuring full guarantee & warrantee obligations. Adequate documents towards association shall be enclosed with the offer.
11. The bidder should furnish the information on all past supplies and satisfactory performance and necessary details of the past supplies so that same can confirmed from the purchaser if required.
12. All bids submitted will also include the following information:
    i. Copies of original documents defining the constitution or legal status, place of registration and principle place of business of the company or firm or partnership, etc.,
    ii. The bidder should furnish a brief write-up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the manufacture and supply of the required equipment within the specified time of completion after meeting all their current commitments.
    iii. The bidder should clearly confirm that all the facilities exist in his factory/manufacturing unit for inspection and testing and these will be made available to the purchaser or his representative for inspection.
    iv. Reports on financial standing of the Bidder such as profit and loss statement, balance sheets and auditor's report for the past three years, bankers certificates etc.

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13. The bidder will furnish Type Test Results. The type tests much have been conducted on the material offered as per the relevant IS in recognized laboratory as per the latest revision of the Technical Specification and the date of Type tests will not be later than 5 (Five) years. The Bids received without type test reports will be treated as Non-Responsive.
14. Even though the bidder meets the above qualifying criteria, they are subject to be disqualified if they have…
    a. made misleading or false representations in the forms statements and attachments submitted in proof of qualification requirements and / or
    b. Record of poor performance such as not properly completing the contract, inordinate delays in supply completion, litigation history or financial failure etc.
15. Notwithstanding anything stated above the purchaser reserves the right to assess bidder's capability and capacity to performs the contract should circumstances warrant such an assessment in the overall interest of the purchaser.
16. The bidder should produce documentary evidence for located and rectified at least 20 faults in 33/11 KV Under Ground cable system successfully in past one year. The performance certificate from competent authority i.e. the officer in-charge of the area cable network is enclosed.
17. The bidder shall clearly indicate the deviations such as Technical Deviation & Commercial Deviations in the prescribed Performa only. The deviations indicated else where in the bid shall not be accepted.
18. The bidder must clearly fill up each and every particular of Guaranteed Technical Particulars (GTP) annexed with this specification otherwise he will be responsible for Technical Non-responsiveness.

NOTE:

a. The bidder is required to furnish the copy of order and performance certificate. In case of order in hand the status of supply from the user is required to be furnished with the bid.

b. In case of non-furnishing of requisite document along with the bid the bid may be rejected.

III. Turnover requirements

Annual turnover of the bidder should not be less than Rs. 10 Crores in any one year of last three financial years (From April 05 to March 08) and total turnover for last three year should not be less than Rs. 15 Crores .

In case of consortium the lead member should meet 50% requirement of annual turnover. Certified balance sheet for the same has to be attached. In case of bidder having financial year closing other then March the last 36 months turn-over shall be furnished.

Turn over means the gross receipt through regular operation only , the receipts through other incomes and excise duty/service tax paid to government will not be considered while arriving the total turn over.

In case of non-furnishing of requisite balance sheet / auditors report along with the bid the bid will be considered as non responsive proposal.

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IV. Existence of bidder

The bidder **(the lead member in case of consortium)** should be in business at least continuously for the past 5 years the supporting document like certificate of incorporation, balance sheet etc shall be furnished along with the bid, and in absence of the supporting documents , the proposal may be rejected.

V. Personnel capabilities

The bidder should have necessary trained and experienced staff to carry out this project. The bidder shall ensure that deputed personnel are trained and experienced for facility management so that all activities are carried out in a highly professional and sound managerial manner. The bidder shall furnish documents regarding the experience of the key personnel proposed to be deployed by him. Bidder shall provide details of experience of their personnel, who are likely to be involved in this project.

The bidder shall provide an undertaking (original) on non judicial stamp paper of appropriate stamp value along with its proposal that it shall comply with the experience and skill sets of the personnel required for this project if the project is awarded to him.

VI. Requisite Plants and tools

The bidder must have the required Plant & tools for carrying out the testing, maintenance services as required in the scope of work.

Bidder shall give a brief write-up on the facility i.e. plant & tools, available with him that are generally used in facilities management. The bidder should confirm on non judicial stamp paper that he will own or have assured access to [through hire, lease, purchase agreement or other means] sufficient number of equipment adequate technology for smooth & speedy execution of all activities of the proposed work.

In case of non-furnishing of requisite undertaking along with the bid the bid will be considered as non responsive proposal.

VII. Bank solvency:

The bidder has to furnish original bank solvency / credit worthiness certificate from any scheduled bank for execution of a project worth Rs. 5 Crores. In case of consortium the lead member should meet 50% requirement of bank solvency / credit worthiness.

In case of non-furnishing of requisite Bank solvency, credit worthiness along with the bid the bid will be considered as non responsive proposal

JVVNL reserves the right to waive deviations, if they do not materially affect the capability of an applicant.

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SECTION-III-PART-III: Requirements of System

JAIPUR VIDYUT VITRAN NIGAM LIMITED

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TECHNICAL SPECIFICATIONS

OBJECTIVES AND SCOPE OF WORK :

1.0 **SCOPE :**

1.1 This specification is intended to cover the design, manufacture, assembly, testing at manufacturer's works, supply, delivery, installation & commissioning of (I) 2 No. Special Purpose & (II) 4 No. General Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment Suitable for Locating Fault on Low /Medium / High Voltage Power Cables up to 33 KV Complete with all materials and accessories for efficient and trouble free operation.

1.2 It is not the intent to specify completely herein all details of the design and construction of equipments. However, the equipment shall conform in all respects to high standards of engineering, design and workmanship and shall be capable of performing in continuous commercial operation up to the Bidder's guarantee in a manner acceptable to the Purchaser, who will interpret the meanings of drawings and specifications and shall have the power to reject any work or material which in his judgment is not in accordance therewith. The offered equipment shall be complete with all components necessary for its effective and trouble free operation along with associated equipments, interlocks, protection schemes etc. Such components shall be deemed to be within the scope of supply, irrespective of whether those are specifically brought out in this specification and/or the commercial order or not.

1.3 Jaipur Vidyut Vitran Nigam Ltd [hereinafter to be referred to as JVVNL] is a distribution Utility entrusted with the distribution of power. It caters power to more than 20 Lacs consumers through about 600 nos. 33KV substations under control of eight distribution circles.

1.4 As JVVNL is in the process of converting its existing over head HT/LT distribution network into complete underground cabling and underground service cabling right up to the consumer’s premises in Jaipur City Circle and in other circles.

1.5 JVVNL intends to increase the operational efficiency and the productivity of its staff by procuring cable fault locating machines early location of the cable fault and restoration of power supply and thus enhance its image.

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1.6 The work of laying HT/LT underground cable is already taken up by JDA & JVVNL on the main roads of tourist interest to give a beautiful look with greater power system reliability. With the increase in the cable network it is imperative to adopt modern practices in the electrical engineering for safe and reliable power distribution.

1.7 Looking at the scenario, underground cable network has increased many folds and consequently the underground faults are also increasing and there is very less flexibility in 33kV and 11kV systems (particularly in summer season). In order to increase the reliability of supply it is very necessary to minimize the fault location time. Hence it is very essential to adopt latest fault location methods to overcome these problems.

1.8 JVVNL (through various separate tenders) is implementing conversion of existing over head lines into underground cable. The Discom is at a stage where quality and reliability of power supply is very high and can't afford to have power failure due to cable faults.

1.9 Therefore in order to minimize the time for Cable Fault Location, route tracing and cable identification in Jaipur city circle and other circles intends to purchase latest cable fault locating system.

1.10 Looking at the scenario, underground cable network has increased many folds and consequently the underground faults are also increasing and there is very less flexibility in 33kV and 11kV systems (particularly in summer season). In order to increase the reliability of supply it is very necessary to minimize the fault location time. Hence it is very essential to adopt latest fault location methods to overcome these problems.

1.11 **It was considered that purchase of the latest fault locating machine is necessary for quick and correct fault location and thereby early restoration of supply including faults in the 33KV XLPE cables.**

1.12 The fault location and network reconfiguration is completed with minimal down time and no manual operation. This improves the quality of supply and reduces network operating cost.

2.0 **STANDARDS :**

2.1 The equipment shall confirm to the latest edition of the relevant standard. The bidder shall mention the applicable standard and shall furnish a copy of the authentic English version of the standard along with the offer.

2.2 Equipment meeting with the requirements of any other authoritative standards, which ensure equal or better quality than the standard mentioned above shall also be acceptable. If the equipment offered by the Bidder conforms to any other standard adopted and the specific standards shall be clearly brought out in relevant schedule. Two copies of such standards with authentic English Translations, shall be furnished along with the offer.

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3.0 **CLIMATIC CONDITIONS :**

Equipment to be supplied against this specification shall be suitable for satisfactory continuous operation under the following tropical conditions :-

S. No.	Particulars	value
1.	Peak ambient air temperature in shade.	55 DEG C
2.	Minimum ambient air temperature in shade	(-) 5 DEG C
3.	Maximum relative humidity.	95%
4.	Minimum relative humidity	10%
5.	Dust storms are liable to occur during the period	from March to July
6.	Height above mean sea level	less than 1000M
7.	Average number of thunder storm days per annum.	65 DAYS
8.	Average annual rainfall	10-100 cm (Depending on area)
9.	Number of months of tropical monsoon conditions p.a.	4

Note :

Climate may be moderately hot and humid tropical conducive to rust and fungus growth. The climatic conditions are also prone to wide variations in ambient conditions. Smoke is also present in the atmosphere. Heavy lightning also occurs during June to October.

4.0 Detailed scope of work:

The overall scope comprises to supply and installation of cable fault locating machine, training and post installation support.

(i) Supply and Installation of fault locating machine :

To supply cable fault locating system at office spread across the jurisdiction of the Discom. The supply and installation will be made at JVVNL site across the Discom.

All the items will be in the name of JVVNL / licensed to JVVNL.

(ii) Operation and Training :

To provide classroom training to the 5 personnel of the Discom at each district headquarters where the machine is to be supplied.

The vendor will provide training to Discom Personnel at district headquarter in at least one or more batches. Each batch will cover 5 people. The training will be provided by trained coachers who are competent in the subject.

NOTE : The supplier of the fault locating machine shall post one trained person at their own cost for operation of the cable fault locating system for one year on each district head quarter where the machine is to be supplied. During this period the person would locate cable faults as

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appear from time to time using fault locating machine and at the same time provide onsite training to the engineers / technicians of the JVVNL.

The vendor will have make its own arrangement of boarding, lodging, travel etc for its instructor(s) at the district headquarter.

(iii) Guarantee and post installation support :

All the supplied cable fault locating machines to have comprehensive onsite guarantee (inclusive of parts and labour) for 66 months from the date of supply or 60 months from the date of installation & commissioning. Post installation support as per the given service levels.

S. No	Item	Service level
1.	Special Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment Suitable for Locating Fault on Low /Medium / High Voltage Power Cables up to 33 KV	To be attended within 12 hours The fault to be removed within 36 hours In case the problem remains unresolved for more than 72 hours then the Machine will have to be replaced with a standby. On repair of the fault the original machine will have be replaced with the standby machine If the repair is not removed within 1 Month, then the vendor will have to supply new Machine.
2.	General Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment Suitable for Locating Fault on Low /Medium / High Voltage Power Cables up to 33 KV	To be attended within 12 hours The fault to be removed within 36 hours In case the problem remains unresolved for more than 72 hours then the Machine will have to be replaced with a standby. On repair of the fault the original machine will have be replaced with the standby machine If the repair is not removed within 1 Month, then the vendor will have to supply new Machine.

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The vendor will have to create a central help desk at Jaipur to register the complaints of the users. The help desk application should allow the help desk personnel log the user's complaint along with date and time.

The helpdesk will operate from 9.00 am to 6.00 pm on all working days. The list of holidays and regional offs are declared by the state government every year. The vendor will have to confirm the holidays / regional offs with JVVNL before assuming that the office is closed.

The help desk will have facilities management staff in adequate numbers in order to attend the problems as per the given service levels.

The help desk will have Fax / telephone / etc facility so as to find out the status of complaint / facility management personnel availability etc for communication with JVVNL.

These numbers will be informed to concerned SE (O&M) and the nodal officer in writing. Any change in the numbers will have to be informed immediately.

Help desk will have personnel and telephone in coming lines in adequate numbers to attend the complaint promptly. The complaint will be deemed to be rectified when the faulty equipment is rectified successfully and the facility management personnel takes the written sign off from the concerned officer in charge.

(iv) Extended Guarantee :

The extended guarantee period shall be for 5 (Five) years after expiry of the initial guarantee period of 5 (Five) years. The obligation of the supplier during extended guarantee period shall be same as defined in the initial guarantee period.

We intent to award post warranty annual maintenance and repairs contract for a period of five years. The annual maintenance & repairs rate contract includes cost of labour and materials/ components. A separate performance bank guarantee must be deposited by the successful tenderer at the rate of 5% of charges quoted for five year, before completion of the initial guarantee period of five years.

The extended warranty shall come into force after expiry of initial guarantee period, i.e., free service shall be provided in the extended guarantee period during which no charges of any sort shall be payable.

This would include minimum one monitoring visit, **once in a month,** by the supplier's representative.

The extended guarantee contract may broadly include the following.:

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(a) Scheduled **monthly** inspection and maintenance of the equipment towards preventive maintenance based on specific need of the equipment.

(b) Unscheduled on call corrective and remedial maintenance services to set right any malfunctioning of the equipment, replacement of unserviceable components, as per the nature of the complaint so that the equipment is placed in to service again. It is expected that such calls shall be attended within a period of 12 hours of receipt of such intimation from the field officers so that there is minimum down time of the equipment.

(c) The format of reporting for said visit shall be mutually finalized after issue of order.

The extended guarantee contract shall form part of supply contract. **The charges as would be quoted by the tenderer for such extended guarantee contract for 5 years shall be loaded in the quoted prices of the main equipment to arrive at computed adjusted prices for comparison purpose and to award contract to most economical proposal, i.e. supply of equipment + extended guarantee cost involved for 5 years after expiry of normal guarantee period of 60 months from supply.**

Payment of annual extended guarantee contract shall be made annually on prorate basis after expiry of one year period on verification of bills by the Engineer designated for particular station where services are to be rendered by the supplier.

(v) Penalty :

In case the supplier fails to adhere to attend the service level as mentioned above and also fails to provide standby machine within 72 Hours, penalty of Rs. 1000 per day subject to maximum of Rs. 25000.00 will be levied by JVVNL.

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SECTION-III-PART-IV: Technical Requirements of System

TECHNICAL REQUIREMENTS

A: SPECIFICATIONS FOR 2 No. SPECIAL PURPOSE VAN MOUNTED SINGLE PHASE MODULAR CABLE FAULT LOCATING EQUIPMENT FOR 33KV UNDERGROUND CABLE :

1.0 SCOPE :

This specification is intended to cover the design, manufacture, assembly, testing at manufacturer's works and supply, delivery, installation & commissioning of special purpose cable locating system Complete with all materials and accessories for efficient and trouble free operation.

It is not the intent to specify completely herein all details of the design and construction of equipments. However, the equipment shall conform in all respects to high standards of engineering, design and workmanship and shall be capable of performing in continuous commercial operation up to the Bidder's guarantee in a manner acceptable to the Purchaser, who will interpret the meanings of drawings and specifications and shall have the power to reject any work or material which in his judgment is not in accordance therewith. The offered equipment shall be complete with all components necessary for its effective and trouble free operation along with associated equipments, interlocks, protection schemes etc. Such components shall be deemed to be within the scope of supply, irrespective of whether those are specifically brought out in this specification and/or the commercial order or not.

The van mounted cable Fault Locating Equipment shall be compact in size in order to be 'mounted the same in **TATA 407/TEMPO TRAVELLER or similar size** vehicle and shall be one single unit. This includes Route Tracing, Pre-locating, Pinpointing and Insulation testing on underground cable rating up to 33kV grade PILCA, XLPE and PVC etc.

The single phase cable fault locating system shall be complete in all respect with all the necessary items, accessories and test techniques and shall be ideal to ensure its maximum performance to detect faults or conditions for short, medium or long underground distribution cable networks along the roadside of a busy cosmopolitan city.

The Fault locating equipment should be of latest design with the help of highly sophisticated menu driven microprocessor based preferably with Windows based operating software with flexibility to upgrade software in future. The unit should be provided with multiple voltage ranges for fault finding on all medium voltage cables.

The specification covers the supply of Van mounted cable fault locating equipment with surging capacity of 32KV and suitable for underground power cables including up to 33KV.

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The system should be capable of location all types of permanent and transient faults viz. core to core shorts, core to earth shorts, high impedance faults, Low Resistance, core breaks, flashover/intermittent, sheath fault location etc. in underground cables. The system should have following functions to help the user:

a) User Friendly.
b) Efficient.
c) Latest Pre-Location methods.
d) Automatic analysis of the test data.
e) History function to store the result automatically.
f) Automatically pre-select the most frequent operating steps.
g) Reports in PDF/HTML format.

The system should work on input supply of 220V ±10%, 50 Hz single phase supply to safeguard the equipment against the abnormally high / low voltage current, the power supply current with a suitable protection system should be incorporated in power supply system. The equipment should be suitable or operation in area where ambient temperature may go up to 50°C. The supplier shall commission the equipments and guide our Engineers in the testing procedure with complete literature of the equipment.

Irrespective of anything said or omitted herein the system shall be suitable for the purpose intended for and shall conform to the latest edition of the relevant standard.

2.0 Applicable Standards :

The equipment/ mobile van covered under this specification shall conform in all respects with the latest editions of all relevant IS or other International standards/ IEC equivalent, thereof.

Equipment meeting with the requirements of any other authoritative standards, which ensure equal or better quality than the standard mentioned above shall also be acceptable. If the equipment offered by the Bidder conforms to any other standard adopted and the specific standards shall be clearly brought out in relevant schedule. Two copies of such standards with authentic English Translations, shall be furnished along with the offer.

3.0 GENERAL TECHNICAL REQUIREMENTS:

The comprehensive cable fault locator shall be suitable for fault locating and pin-pointing the following types of the cable faults vz.

- High Resistance
- Low Resistance
- Intermittent type or flashing fault
- Sheath Fault Location

general technical requirements are as under.

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3.1 Integrated Control Unit:

The control of the fault locating system should consist of a large monitor (15' TFT) and a central control panel. The units central control unit should co-ordinate the operations of all other modules through windows/Linux based operating system. Its salient features should be as follows:

The central control element –'JOGDIAL'/ menu driven shall have the controls for all the system functions. There should also be possibility to directly access the test history, and quick menu. The system should have the facility to automatically pre-select the operating steps which occur frequently during the operation.

The control unit should be Computerized (menu driven) based and responsible for all the control operation of various functions such as Range Selection, Voltage and current limit adjustment, Surge sequence selection, auto discharge, earth monitoring, safety interlock monitoring etc.

The control unit should provide a visual indication of failure of safety circuits/incorrect selection etc. with possible corrective methods. The information shall be provided to the user in the form of graphical as well as sentence written form on the screen.

Constant monitoring of all safety circuits such as earth monitoring circuit etc. should be inbuilt into the control unit.

The comprehensive Vehicle Mounted cable fault locator set shall be suitable for fault pre-location, Fault conditioning (i.e. burning, if required)and pinpointing of the fault for following types of cable systems

- Rated Volts: 11 KV, 22KV, 33KV power cables and 1.1 KV, 440V grade LT/control cables of all types.
- Installation: Underground (solid earth / RCC / cable trench), Overhead (through cable trays) or partly underground & partly above ground.
- Distance: up to a minimum of 25 KM length
- Cable size: up to 630 sq mm
- Insulation type: PVC, XLPE, PILC.

The cable fault locator machine should be suitable to locate cable fault and Pin-Point in areas with multiple energized / de-energized cables in the same route without affecting the accuracy.

The Van Mounted comprehensive multifunctional set should include at least the following units with the features mentioned below and conforming to the detailed specifications for the unit.

3.2 Integrated H.V. Equipments:

1. The equipments shall be suitable for input voltage of 220V ± 10% 50Hz single phase.
2. The H.V. equipments and connectors shall be adequately insulated from operator's cabin. The set shall have inbuilt protection against over load, high voltage and earth faults.

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3. Single phase H.V. output cable shall be supplied along with other input/output and earthing cables. The minimum length of all cables should be 50mtrs wound on rotating drums should be provided for

    2. HV Cable Drum
    3. Mains Cable Drum
    4. Earthing Cable Drum
    5. Auxiliary Earthing Drum
    6. R.F. Cable Drum

The minimum length of all the cables should be 50 Mtr wound on rotating drum.

3.3 Integrated D.C. Testing Unit :

The facility will be used to pressure test the power cables and should be operational through control unit provided with auto ranging voltmeter and ammeter having digital display with possible graphical representation & timer representation through graphical format. The equipment should have facility of automatic Shut-off at breakdown voltages of cables. The equipment should have protocol facility for recording/holding the voltage and leakage current breakdown value on the screen also should be able to take printout of current & voltage over time.

1. Range: 0-40KV or more, continuously variable.
2. Supply: Mains operated 220V ±10%, 50Hz single phase.

3.4 Integrated Very Low Frequency (VLF) Test Set:

The VLF at 0.1 Hz, with digital technology waveform voltage is to be used for testing medium voltage cables with extruded insulation according to VDE DIN 0276-620 (CENELEC HD 620), IEEE P400.2 and for impregnated paper insulation according to VDE DIN 0276-621 (CENELEC HD 621) and IEEE 400-2001, as well as other high voltage insulations up to 33 KV RMS. The output waveform needs to be a symmetrical cosine wave/sine wave according to IEC 60060-3 and it has to be fully symmetric and load independent.

It should only require a short test time and should not affect the general condition of the insulation material. It should also be possible to create a square wave voltage of min 54 KV with an adjustable rise time. The frequency of the created alternating voltage should be 0.1 Hz.

The created report has to show all the detailed and previously entered cable data, the exact setting as well as the measuring result shown in a graphical diagram.

Technical specification of the VLF generator:

The HV Testing and Diagnostic equipment shall comprise the HV unit, discharge unit and a control unit as well as all necessary accessories and connection cables.

Technical data :

- Power supply 230V / 50Hz
- Programmable output voltage

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- 0 – min 54 KV square wave Peak,
- 0.1 Hz symmetrical Cosine/Sine wave
- Frequency 0.1Hz
- Input power: Approximately 1KVA.

3.5 Integrated Burn Unit :

The burning current for facilitating preconditioning of stubborn or joints failures shall be as follows with adjustable burning current/ Voltage.

The burn unit should be with a DC system burning shall be ranging from 0-32KV DC & burning current shall be equals or more than 500mA.

The unit shall be provided with applied voltage & fault discharge current meters.

The unit shall be provided with a thermal overload protection and shall have auto-reset facility.

3.6 Integrated Surge Generator :

The surge generator shall be required to perform Proof test, burn and locate the fault in power cable by high voltage impulse method. The surge generator should provide an easy–to-hear "Thump" for pinpointing flashover faults.

It shall produce single short surge as well as repetitive surge this frequency can be varied using a timer. The single short surges are meant for breaking down a fault for analysis with the digital fault locator and repetitive surges for pin pointing the faults with seismo-phone.

Specifications :

S.No.	Particulars	Value
1.	Surge Voltage	0…..32 KV In suitable steps of 4/8/16/32KV and each step continuously variable
2.	Surge Energy	Min 2000 J
3.	Surge Rate	3s…..10s
4.	Power Input	230V, 50Hz
5.	Operating Temperature	-25 deg C……+55 deg C
6.	Storage Temperature	-25 deg C……+70 deg C
7.	Protection Rating	IP 40
8.	Safety Protection	The instrument should be operational through control unit and should have protective PCBs. Auto discharge, capacitor discharge, earth monitoring, capacitor charge monitor etc.
9.	Others	Amount of energy dissipated from surge unit into cable shall be displayed on central control unit.

3.7 Integrated Filter Unit:

This unit will be used to pre-locate the high resistance intermittent and flashing faults in conjunction with Digital fault locator.

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1. Impulse: 0-32KV in suitable steps of 4/8/16/32KV and each step continuously variable
2. Energy Dissipated: Min. 2000 joules or more

3.8 Integrated Microprocessor Based Transient Recorder : (Pre-locator)

The Pre-location of faults in cable shall be carried out using multiple built-in fault locating method, with the help of highly sophisticated menu driven microprocessor based digital fault locator preferable windows based operating software with flexibility to upgrade software in future. The above fault locator will be used to pre-locate the faults in power cables with following methods.

1. Modes of operation:
   a) Pulse Reflection Method/TDR
   b) Impulse Current Method
   c) Arc Reflection Method
   d) Decay Method
2. Measuring Range: 50mtrs to 50Km in suitable steps.
3. Accuracy: 0.2% or less of the range.
4. No. of Memories: automatic storage of all data with a special history function and the seven days old data should automatically be stored into daily files. The curve in memory shall be stored with complete information of operation mode, date, time, length of cable and other relevant parameter.
5. Measuring variants: Normal / core, comparison, difference.
6. Power supply; 220V ±10%, 50Hz, 1φ
7. The equipment shall be suitable for using in conjunction with a surge generator specified above without the need for any accessory in between generator and digital fault locator.
8. The tenderer shall supply along with the quotation complete details of all types of curves obtained on the screen under different conditions of fault break-down with drawings and explanations.

3.9 Seismic Cable Fault Pin-pointing Set (Portable):

The pin pointing set is to used in connection with above surge generator and should be capable of pinpointing acoustic disturbances created by the dissipation of energy from surge generator at the fault in both shielded and directly buried cables by detecting both electromagnetic and acoustic pulses. Seismic disturbances picked Should be indicated to the operator, both audibly on the head phone and visually on a display meter.

It should be battery operated portable instrument weighing not more than two kg. consisting of a receiver, amplifier and combined sensor which measures electromagnetic and acoustic signals of the flash over in a cable.

It shall function as a directional acoustic listening device for pinpointing of flashover faults in underground power cables. It shall have the following features:

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(a) The unit shall be handy & rugged, and shall comprise of receivers, headphones, sensors, amplifiers and any other auxiliary items as necessary for operation of the unit.

(b) The set should be able to determine the proximity and direction to the cable fault by measuring electromagnetic surge and acoustic emission.

(c) The set should be able to measure the time delay between acoustic and electromagnetic signals.

(d) In the acoustic mode the set should have a feature to filter and eliminate background noise and electromagnetic interferences.

(e) It should be able to pinpoint the exact location of the fault.

(f) The instrument should be battery operated.

(g) The set should have mute feature to activate while in motion.

(h) It should have adjustable feature for adjusting the electromagnetic gain & acoustic gain.

(i) It should have an LCD display with backlit feature.

(j) The unit shall be provided with acoustic headphone set to receive the acoustic signal for pin pointing the fault point.

(k) The LCD display shall indicate the cable route through the electromagnetic signal in bar graph form & the proximity to fault point by a numeric display.

(l) The unit shall include lightweight receiver with carrying straps, handy sensor, all required and related accessories with carrying case and user's manual with complete operating and maintenance instructions The tenderer should indicate the weight and overall size of the set in their offer.

3.10 Cable Identification Set- (Portable):

The system is to used for selection of single core and multi core cables from a bunch of cables. The system should consists of a transmitter and Receiver unit and shall be light, portable, with facility to identify even live cables. The unit should be completely menu – driven, with graphic display.

Technical Data:

Transmitter:

Output voltage	:	to be specified by the bidder
Output current	:	Min 30 Amp
Power Supply	:	220 V+-10% 50 Hz/battery operated

Receiver:

Display	:	Graphic LCD
Sensitivity	:	100%; at 400 Ω loop resistance
Power Supply	:	DC operated/Re-chargeable battery
Cable Dia	:	Suitable up to 120 sq mm core size
Sensitivity	:	Min. 4 stages continuously variable

3.11 Sheath Fault Locator :

This device is to be used for cable sheath testing as well as for sheath fault pin pointing according to the step voltage method. With the integrated high voltage DC source, the

measuring principle should enable the pre-location of cable sheath faults. For cable sheath fault pin pointing according to the step voltage method, the device should apply a defined DC pulse pattern and the step voltage can be picked up by using the receiver set.

Main features :

- Cable sheath testing up to 10kV
- Cable sheath pre-location with high precision measuring bridge
- Cable sheath fault pin pointing
- Integrated discharge unit
- Step-less voltage adjustment
- Mains and battery operated

Technical Specifications:

Mains supply:	240 VAC, 50 Hz
Output voltage:	0 – 10 kV
Output current:	Min 550 mA

3.12 Murray Loop Bridge-Portable Set:

This set shall be suitable for locating high resistance faults in underground power cables using Murray's D.C. Bridge Principle. The unit shall have at least the following features:

(a) The unit shall be small and rugged design.

(b) The bridge supply voltage shall be 10 KV.& the unit shall be supplied with accessories.

(c) The Fault Distance shall be displayed on the Unit/percent of cable length.

(d) The Bridge Balance Indication shall be by two LEDs/LCD provided in the Unit.

(e) The Unit shall be provided with an adjustable potentiometer for adjustment to obtain the null balance point.

(f) The Unit shall be provided with a fuse check LED indication for Bridge Potentiometer.

(g) The Inherent Basic Uncertainty of the Unit shall be <= 1% of cable length.

(h) The unit shall include mains leads, earth cable, HV connecting cable, earth terminals, battery connecting cables with battery clips, accessories bag and users manual with complete operating and maintenance instructions.

3.13 Tools:

i) Digital Multi-meter –Portable.

ii) Megger 10KV (5 mA short Circuit Current) Portable (make AVO, Megger)

iii) Measuring wheel, operator cabin fan, earth spikes.-Portable.

iv) Set of spanners, screw drivers etc.

v) Discharge Rod up to 80 KV

Any other tool not mentioned above but otherwise required should also be supplied.

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3.14 Safety Module:

For monitoring of the following functions:

a) Monitoring of the screen of test cable. Loop monitoring unit for the conductor loop.

b) Fault voltage switch for monitoring the potential between earth and van chassis or test equipment respectively, for voltage exceeding 35V.

3.15 Mounting Van for the Comprehensive Set:

All the Units of the Comprehensive Van Mounted Multifunctional Cable Fault Locator system consisting of Cable Fault conditioning (burn-down), Pre-Location, Route Location, Pin-pointing & Testing of HT & LT cables shall be mounted on a suitable Equipment Mounting van with Power Supply connection arrangement fitted with at least four heavy duty wheels and one hook at the front for facilitating transportation by means of a vehicle. However, it shall be also possible to use each unit of the comprehensive set independently for the respective functions.

3.16 Mounting, Pre wiring and Mechanical fittings on Van :

a) Steel frame for mounting the following instruments:

i) Computer Aided fault locator

ii) High pressure test: All the equipments should be mounted on steel frames.

iii) Rotating cable drums should be provided for:

- HV cable drum-50m
- Mains cable drum-50m
- Earthing cable drum-50m
- Auxiliary earthing drum-50m
- R.F. cable drum etc-50m

iv) Safety screens be provided to isolate the HV area from operating area.

v) Suitable cupboards and tables for storing hand held instruments, writing desk.

vi) Revolving chair for operator and sitting arrangement of 4 persons.

vii) Diesel driven van with conditioning.

viii) Fully carpeted side walls & roof for Electrostatic Protection.

ix) Fully Insulated floor for safety .

4.0 Generator -set :

The gen-set shall meet the below mentioned specifications & has to be placed at specially created housing in the van body / side body of the van.

Rated Output	5.6 KVA
Maximum Output	6.5 KVA
Rated Voltage	220 Volts
Frequency	50 Hz
Fuel	Petrol / 3 Ltr Per Hour
Starting	Self Start by key
Oil Alert	Provided

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AVR	Automatic Voltage Regulation
Frame	Pipe Full Frame
Battery	Extra
Dimension (LxWxH) mm	708 x 548 x 493
Weight (Dry)	78 Kgs

Preferred make : HONDA/TOSHIBA

5.0 Specifications for Fabrication of CABLE FAULT LOCATING VAN ON TATA 407/TEMPO TRAVELLOR or Equivalent :

1. Body Structure :

The structure shall be made of steel sections as mentioned below & 12 mm thick Blata Packing with anti vibration (Reinforced Rubberized Flat Section) over chassis frame:

a) Runner / Strengthening member – MS Channel 100x50x5mm

b) Cross Member - MS Channel 75x40x4mm

c) Floor frame - MS Angle 40x40x5mm

d) Super Structure (Hoop Sticks) - Top Flat section 40x40x2.5mm/ MS Square Tube 40x40x2mm

e) Super Structure(Roof Curvature/ Taper & Flat surface) - Top Flat Section 40x40x2.5mm MS Square Tube 40x40x2mm

f) Entire structure , spring Leaf Floor Angles are to be anti-corrosive treatment And paints .

g) TATA 407 should be in one cabin.

h) Rear End is to be provided with red reflectors.

i) Mud Guards are to be provided.

j) Ballata Packing (Rubber Packing between Chassis & body).

k) Stairs should be with aluminum checkered plate.

l) Lock Should be of good quality. (Godrej with OEM certificate)

2. PANNELLING :

a) External - 18SWG G.L Sheet

b) Roof - 20SWG G.L.Sheet

c) Internal - Carpeting Over 3mm Fly.

3. INSULATION :

All Walls and roof will be insulated with 40mm thick Thermocol Sheet.

4. FLOORING :

Base of Floor - Water Proof Ply 12mm thick Screwed through base floor Of 3/6 mm MS .Sheet welded to floor frame.

Upper Layer - Vinyl Floor Sheet 2mm thick fixed over fly.

5. DOORS:

a) Hinged type doors (Double leaf inside collapsible) shall be provided for Main Compartment.

b) Hinged Type outside open able (Ambulance type) rear doors

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c) Rear door to be provided with cable cutout section(6"x6")

6. WINDOWS:

Adequate size of windows two way horizontal full sliding glass of 5mm thick Toughened glass encased in Aluminum Sections slide on Aluminum 'Z' Section in crew compartment . The window shall have including robust type locking arrangement from inside. In equipment portion both sides shall have fixed Window. All glass windows should be covered with removable metal frame with metal net. (Should be Protected from Stone)

7. ELECTRICAL FITMENTS:

a) 05 Nos. Light and 02 Nos. Light Battery Operated.

b) 1.5 Ton Air conditioner

c) Fan (3 nos.)

d) Tube Lights and Fans should be mount such that its frame should not be touch or isolated from vehicle body.

8. PAINTING :

Complete body of the Van will be Painted OFF WHITE colour With P.U. Paint after surface treatment.

9. **OTHERS :**

Van will be fabricated as per standard fabrication practice and specifications confirming to All India Motors Vehicles Act. Provisions of Standards Fitment will be kept such as First Aid Box, Fire Extinguishers, Rear Bumpers , Stephaney, Cradle , Tool Box, Rear View Mirrors etc.

10. **Guarantee :**

Notwithstanding to that specified in this specification, the supplier is responsible to provide all necessary component for satisfactory working of the system in locating the fault in the cable. The VAN should be guarantee as per the manufacturer's specifications. The supplier shall have to offer to JVVNL the same standard Guarantee card of the principal manufacturer of the Van. Registration of the van shall in the name of purchaser.

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B: SPECIFICATIONS FOR 4 No. GENERAL PURPOSE VAN MOUNTED SINGLE PHASE MODULAR CABLE FAULT LOCATING EQUIPMENT FOR 33KV UNDERGROUND CABLE:

1. Scope :

The scope covers complete design, engineering & supply of the Comprehensive Van Mounted Multifunctional Cable Fault Locator system shall be used for Cable Fault conditioning (burn-down), Pre-Location, Route Location, Pin-pointing & Testing of HT & LT cables of different types & sizes. The set shall be suitable to carrying out the above-mentioned multifunction on power cables of various voltage levels mainly 33KV, 11KV, 415V and control cables with 1.1 KV grade. The set shall be used for cable types namely XLPE, PVC, PILC with Al / Cu conductor. The cables are laid underground (under plain earth, trenches, or RCC surface), above ground or partly under & partly above ground with maximum cable length around 25 Km.

The several runs of cables of different voltage levels are laid on common racks / underground trench and during the cable fault identification process, nearby cables shall be in charged condition, hence the accuracy of the set being offered shall not suffer due to the above. The set shall be capable to identify and locate faults for all types of cable faults including high resistance, low resistance or intermittent / flashing faults using a single or combination of units in the set. Vendor shall specifically mention the use of individual unit being offered for the particular type of fault with range. The various units being offered by the vendor as a comprehensive multifunctional set shall be fully compatible with each other, wherever required.

The Technical specification required of the various units attached to the comprehensive multifunctional set for Cable Fault conditioning (burn-down), Pre-Location, Route Location, Pin-pointing & Testing are given below. Point-wise conformity to the specifications shall be submitted along with the offer without which the offer shall be liable for rejection.

The comprehensive cable fault locator set shall be suitable for fault locating and pinpointing the following types of cable faults viz.

- High resistance
- Low resistance
- Intermittent type or flashing faults.
- Sheath Fault location

The type of faults The Comprehensive Van Mounted Multifunctional Cable Fault Locator system shall be used for Cable Fault conditioning (burn-down), Pre-Location, Route Location, Pin-pointing & Testing of HT & LT cables of different types & sizes may be 3-phase short circuit, ground fault, phase fault and open circuit.

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The cable fault locator set should be suitable to locate cable fault and trace cables in areas with multiple energized / de-energized cables in the same route without affecting the accuracy.

2.0 GENERAL REQUIREMENT

The system should be capable for conducting the following functions:

a) Cables to be tested up to 33kV.

b) Pre – locating of faults by the following method

- Pulse Reflection Method (Pulse Echo)/TDR Method
- Secondary Impulse Method / ARC Reflection Method (ARM)
- Impulse Current Method.
- Decay Method

c) DC Test set 0-32 kV or more

d) Surge generator 0-32 kV

e) Pin Pointing of cable fault using acoustic method, coincidence method, delay time mode method with suitable display to indicate various parameters.

f) Cable route tracing by audio frequency generator or any other latest technique in order to give depth of the cable etc. on LCD display.

g) Cable identification from bunch of cables

h) Megger 0-10 kV (With 5 mA Short Circuit Current) (Reputed Make i.e. Megger, AVO)

i) Cable Drum Rack

2.1 The single phase measuring set up shall be provided with 50 mtr of HT cables, LT main cable, earthing cable, and RF cable.

Note: Cables shall conform to relevant standards.

2.2 The FLC van shall have practical safety devices including automatic checks inter-locking circuit, built if forced discharge circuit and the high voltage can be prepared only after all prerequisites are checked by the safety circuit so as to ensure that no damage is caused to the equipment in case the surge lead is connected to a live HT cable accidentally that is necessary protection against back feeding to be provided in any of the cases described below.

2.3 The output voltage shall remain turned off or cannot be turned on in case of :

1. Undue voltage rise in the output on earthing connection on the surge capacitor.
2. Flash over in the testing mode.
3. Thermal overloaded of the voltage stages of particular component such that the cause of disconnection shall be indicated by signal lights (LED's).
4. If the back door/ HV side of the VAN is open.

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2.4 The complete system shall be made operative via centralized control unit responsible for various functions i.e. testing, burning, surging and SIM mode and continuous monitoring of the safety circuits shall be indicated via LEDs.

2.5 The control unit shall be provided with suitable voltage meter and ammeters.

2.6 The system should be capable of locating all types of permanent and transient faults viz. core shorts, core to earth shorts, high impedance faults, core breaks, flash over etc.

2.7 The system should work on input supply of 220 V ± 10%. 50 Hz single phase supply to safeguard the equipment against the abnormally high / low voltage current, the power supply current with a suitable protection system should be incorporated in power supply system. The equipment should be suitable for operation in JAIPUR DISCOM where ambient temperature may go up to 50 deg C. The supplier shall commission the equipment and guide our Engineers in the testing procedure with complete literature of the equipment.

3.0 CERTFICATE AND INSTRUCTION BOOK :

The supplier/contractor shall be required to furnish to the purchaser office/consignee, whichever is necessary the following documents along with the consignment.

- Printed pamphlets/catalogues.
- Instruction Book
- Test Certificates.
- Guarantee card.

4.0 DETAILED TECHNICAL SPECIFICATION :

The cable fault locating system shall consists of the following:

- Microprocessor based Transient Recorder/Fault Locator.
- D.C Test, Surge and Burn Units.
- A pin – pointing set, cable route tracer, cable identification set and measuring wheels etc. should be supplied. All necessary cables should be supplied suitably mounted on drums. The system shall work on input supply of 220 V $\pm$ 10%, 50 Hz, $\pm$ 5% single phase.
- Constant monitoring of all safety circuits such as monitoring circuits etc to be in built in control unit.

4.1 COMPREHENSIVE INTEGRATED HV FAULT PRE-LOCATON & CONTROL UNIT :

Pre-location of faults in cables shall be carried out using the principle of Secondary Impulse Method/ Arc Reflection Mode with the help of highly sophisticated Menu driven microprocessor based Digital Fault Locator. The equipment should have at least following features:

- Should be fully menu-guided
- Should feature interactive menu-guidance
- Should have automatic cursor setting for fault location
- Should have measuring input voltage proof min 250 V
- Display should be color LCD.

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- Should have facility for printer connection via RS 232/USB
- Should have facility for data transfer to PC through RS 232/USB
- Should have facility for memory up to 100 records.
- Suitable software to be provided for handling, storage and analysis of results as a part of the unit.
- It should have automatic far end indication and fault recognition with distance indication.
- The instrument shall have the features to display the fault trace and continuous reflection traces. In addition the instrument should have a feature to display differential trace of faulty cable with respect to a healthy cable.
- **Should support following methods:**
  - Pulse Echo Method / Time Domain Reflection (TDR)
  - Secondary Impulse Method (SIM)/Arc Reflection Method
  - Impulse Current Method (ICM)
  - Decay Method

Technical data:

- Output voltage of transmitting pulse: min 10V up 60 V
- Pulse width of transmitting pulse: (40ns … 04us) min
- Voltage withstand: 250V AC (50/60 Hz)
- Output impedance: 20-150 Ohms Auto ranging as well as manually selectable.
- Measuring ranges @ v/2=80m/µs: 50m-50Kms Auto ranging as well as manually selectable.
- Measuring accuracy: Within 3Mtr in all ranges
- Sampling rate: 200 MHz
- Resolution: min 1.5 m
- Propagation velocity v/2: 100-150 m/µs
- Number of memories: at least 100
- Display: LCD display 320x240 resolution
- Power supply for operation and/or charging: 100-240V (50/60 Hz)
- Operating temperature: -20 … +55°C
- Storage temperature: -20 … +60°C

Dimensions : To be specified by the Bidder
Weight : To be specified by the Bidder

4.2 DC High Voltage Test set :

It shall also be possible to carry out the Insulation Testing and high voltage DC testing of the cable under test from the same unit. The comprehensive set shall be utilized for performing the high voltage DC testing of the cables for accessing the health of the cable insulation by measuring the leakage current. It shall have the following features:

(a) The unit shall be handy/Van Mounted and of rugged construction. It shall have built in discharge unit for automatic discharge after shutdown.

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(b) The set shall have all the safety features necessary for the protection against high voltage e.g. auto discharging after switching off, high voltage ON/ OFF with security, Auto-OFF in case of break in power supply etc.

(c) The DC Cable Test Voltage of the Set shall have a range of 0 – 32 KV min DC Voltage.

(d) The set shall be provided with an adjustable leakage current range up to at least 50mA with a minimum resolution of 1 mA. It shall also be provided with a leakage current indicator.

(e) The set shall automatically trip on the leakage current exceeding the set limit value with the display of breakdown voltage.

(f) The unit shall include mains leads, earth cable, HV connecting cable, earth terminals, battery connecting cables with battery clips, all required and related accessories with carrying case and users manual with complete operating and maintenance instructions.

D.C. Testing : 0-32KV min DC Continuously adjustable (Auto Ranging)

4.3 Surge Generator Unit:

The Surge Generator Unit shall be used as thumper for charging of cable under test (i.e. defective cable) till sufficient flashover is achieved at the point of fault. The set shall be used in conjunction with Surge Receiver Unit for fault pinpointing. It shall have following features:

(a) Surge Voltage Range: 0-4KV, 0–8 KV, 0–16 KV & 0–32 KV

(b) Surge Energy: Minimum 2000 Joules in each range except 0-4KV where it should be 1500 Joules

(c) The set should be provided with standard safety features like 'Zero start voltage interlock', ' High voltage ON lamp', automatic grounding upon shutdown, Auto-OFF in case of power supply break and overload protection with circuit breaker etc.

(d) Surge rate: continuously variable from 3 Sec to 8 Sec min. & Single impulse feature shall also be available.

(e) The unit shall be compatible for use with Surge Receiver Unit and Arc Reflection Unit.

(f) The unit shall include mains leads, earth cable, HV connecting cable, earth terminals, battery connecting cables with battery clips, all required and related accessories with carrying case and user's manual with complete operating and maintenance instructions.

Impulse	:	0-32 kV in suitable steps of 0-8/0-16/0-32 kV and each step continuously variable.
Surge Energy	:	2000 Joules (Min)
Impulse interval	:	Single shot, 20 per minute approx.

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Safety Protection	:	- 2 automatic discharging devices (internal and external discharge) - Reliable operated surge switch electromagnetic operated - Separate system and protection grounding device - Safety control circuit according to VDE 0104
Fault Burning	:	Up to 210mA(min.)

Surge Generator LT or Thumper

Voltage Range	:	0-4KV
Discharge Energy in Joules		1500J min

4.3.1 Filter Unit or ARC reflection Filter Unit or ARC Stabilizing :

Generally pulse echo or reflection method is applied for cable fault location however it may not be suitable for high impedance or resistance faults. Therefore to overcome these limitations in pulse echo method, a suitable band pass filter unit should be supplied to stabilize this ARC at the flashover or the point of fault.

The offered filter must simplify the operation causing less stress, causing minimum damage on the tested cables to detect the high resistive faults. There should be complete compatibility of TDR, Surge Generator/Thumper with the filter unit. This unit must filter or stabilize the arc at the fault point and record the same in the supplied TDR to compare it with previous trace recorded without the filter unit in the same core. Suitable coupler for coupling the filter unit with the TDR and Surge generator must be supplied.

The offered filter must contain switching elements necessary for the triggering and the coupling of the pulse. After the pre-location using the SIM/ARM method, there must a decoupling element which must by pass the surge generator for making it ready for use in pinpointing the cable fault. The control unit should connect automatically the filters with appropriate coupler with the surge generator and TDR when ARM/SIM mode.

4.3.2 Inductive coupler :

Inductive Coupler for pre-location of high resistance faults with a Surge Voltage Generator according to the Impulse Current Method (ICM).

4.3.3 Capacitive coupler :

Capacitive voltage divider for location of intermittent cable faults up to 32 KV to perform the Decay Method.

4.4 Integrated Fault Conditioning Unit (Burn-Down Set):

This set shall be capable for burning down high resistance faults in cables to facilitate the fault pre-location. The Unit shall have the following features:

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(a) The voltage range of the Burn-down Unit shall be at least up to 0-32 KV with adjustable current up or more 210 mAMPS .

(b) The unit shall be provided with applied Voltage & fault discharge current meters.

(c) The Unit shall be provided with a thermal overload protection and shall have auto-reset feature.

(d) The Unit shall be provided with protective terminals to prevent accidental contact.

(e) The Unit shall be provided with safety earthing facility for safe operation.

4.5 Surge Wave Receiver Unit (Pin-Pointing Set) :

It shall function as a directional acoustic listening device for pinpointing of flashover faults in underground power cables. It shall have the following features:

1. The unit shall be handy & rugged, and shall comprise of receivers, headphones, sensors, amplifiers and any other auxiliary items as necessary for operation of the unit. The set should provide detection of both acoustic and electromagnetic pulses emitted from an arcing fault when it is surged.
2. The set should be able to determine the proximity and direction to the cable fault by measuring electromagnetic surge and acoustic emission.
3. The set should be able to measure the time delay between acoustic and electromagnetic signals.
4. In the acoustic mode the set should have a feature to filter and eliminate background noise and electromagnetic interferences.
5. It should be able to pinpoint the exact location of the fault.
6. The instrument should be battery operated.
7. The set should have mute feature to activate while in motion.
8. It should have adjustable feature for adjusting the electromagnetic gain & acoustic gain.
9. It should have an LCD display with backlit feature.
10. The unit shall be provided with acoustic headphone set to receive the acoustic signal for pin pointing the fault point.
11. The LCD display shall indicate the cable route through the electromagnetic signal in bar graph form & the proximity to fault point by a numeric display.

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12. The unit shall include lightweight receiver with carrying straps, handy sensor, all required and related accessories with carrying case and user's manual with complete operating and maintenance instructions.

Features:

- Acoustic method including manhole distance location
- Accurate route tracing
- Digital indication of proximity of the fault
- Cable depth measurement in combination with the surge coil
- Water-resistant design
- Integrated head phone
- Large illuminated LCD display
- Digital filters for suppression of traffic noise
- Easy menu operation
- Lightweight

4.6 CABLE ROUTE TRACER :

The Cable Route Locator shall be suitable for cable fault location process of underground cables by identifying the cable from the surface, without excavation. The equipment shall be capable of tracing the buried cables with the ability to measure the depth of the cable. The unit shall have at least the following features:

a. The set shall comprise of a transmitter & receiver.
b. The set shall be battery operated (rechargeable) and portable type, rugged construction with necessary accessories & bag / case.
c. The cable tracing shall be done with audio & visual signals so as to make it easy to follow & trace the cable route.
d. It shall be possible to detect the depth of the cable (at least 4 meter) at any point by using sufficient wattage of the generator up to 45 watts at least.
e. Automatic impedance matching shall be required for better operations.
f. It shall also be possible to detect the AC signals (50 Hz) from a charged cable without transmitter.
g. Filters shall be provided to optimize the measurements and minimize the ambient noise.
h. The transmitter of the tracer should be capable of energizing the cable either by magnetic induction or by direct conductive connection to the cable.

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i. The receiver should filter out electric noise and static noise.

j. The unit should also be able to determine the depth of the cable.

k. The unit should be suitable to trace cables in areas with multiple energized / de-energized cables in the same route.

a) Audio Frequency Generator :

The audio frequency generator should be ideal for locating the route of underground cable as well as for pinpointing of cable faults when used with receiver and identification of particular cable from the bunch of the cables.

Technical Specification :

LF output power:	0-50Watt or more (adjustable normally or automatically)
O/P Frequencies:	To be indicated by the bidder/contractor.
Output Adjustment	to be specified by the bidder
Permitted load resistance:	any short circuit, open circuit, continuous but with reactive load etc
Power Supply:	Unit should be capable to work on mains AC supply with built in charging and battery unit.

b) The audio frequency receiver:

The audio frequency receiver set should be battery operated and suitable to above frequencies. The receiver should be connected directly to the search coil. The coil can be rotated to 0-45 degree or 90 deg spans in position for added veracity should hove set fourth high impedance and should provide maximum attenuation of external noise

4.7 Cable Identification Set:

The system is to be used for selection of single core and multi core cables from a bunch of cables. The system should consist of a transmitter and Receiver unit and shall be light, portable, with facility to identify even live cables. The unit should be completely menu – driven, with graphic display.

Technical Data

Transmitter

Output voltage	:	100V (min.) (15 pulses/min)
Output current	:	30A (min.)
Power Supply	:	230v, 50 Hz/ Battery operated

Receiver

Display	:	Graphic LCD/ Analog signal
Sensitivity	:	100%; at 400 Ω loop resistance
Power Supply	:	Battery operated

4.8 Connection Cables:

All the cables required for the operation of the cable Fault Locating system shall be at least 50 mtrs. Mounted on suitable drums along with RF cable of 50 mtrs. Cable for

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operating the fault locator in detached mode Viz. earthing cable, main cables, HV cable, auxiliary earthing cable,

Cable drum rack

Hand operated cable drums with lockable brakes for accommodation of:

- 50 m high voltage cable
- 50 m mains cable 3x4 mm²
- 50 m ground cable 16 mm²
- 50 m RF cable (TDR)
- 50 m Auxiliary Cable 16 mm2

High Voltage Cable

50 m flexible HV coaxial cable with coaxial plug, connection clamps and strain relief

Rated voltage: 80 kV DC -
Insulation material: EPR

Mains cable

50 m, 3x4 mm², with mains plug
Mains plug type CEE 32A

Ground cable

50 m with tapping ferrules every 3 m, including clamps
Type: YF 16 mm² transparent

RF Cable

50 Meters for connecting the TDR to the faulty cable. This should be separate as the combination of HT and TDR cable shall not be suitable as the HT cable generally gets faulty in operation.

Auxiliary earth cable

15 Meters for creating an auxiliary earth in case of non availability of system earth to safeguard the system.

4.9 Tools :

The following Tools shall be supplied.

- Discharging Rods 80 KV
- Measuring Wheel,
- Operator Cabin Fan
- Earth Spikes
- Digital Multi-meter Reputed make
- Megger 0-10 KV (5 mA short Circuit Current)
  make : Megger, AVO or equivalent make
- Set of spanners, screw drivers etc.

Any other tool not mentioned above but otherwise required should also be supplied.

4.10 Safety Measure :

The control unit should be Computerized (menu driven) based and responsible for all the control operation of various functions such as Mode Selection Surge Test, Burn and Arc Reflection, Range Selection, Voltage and current limit adjustment, Surge sequence selection, auto discharge, earth monitoring, etc. from a single button and no access to the high voltage side shall be available to the operator as well as Operator guidance with on-screen help texts.

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The control unit should provide a visual indication of failure of safety circuits/incorrect selection etc. with possible corrective methods. Constant monitoring of all safety circuits such as earth monitoring circuit etc. should be inbuilt into the control unit, safety interlock monitoring etc.

Safety function should be incorporated in the van suitably.

4.11 Mounting Van for the Comprehensive Set:

All the Units of the Comprehensive Van Mounted Multifunctional Cable Fault Locator system consisting of Cable Fault conditioning (burn-down), Pre-Location, Route Location, Pin-pointing & Testing of HT & LT cables shall be mounted on a suitable Equipment Mounting van with Power Supply connection arrangement fitted with at least four heavy duty wheels and one hook at the front for facilitating transportation by means of a vehicle. However, it shall be also possible to use each unit of the comprehensive set independently for the respective functions.

4.12 Mounting, Pre wiring and Mechanical fittings on Van :

Steel frame for mounting the following instruments:

i) Computer Aided fault locator

ii) High pressure test: All the equipments should be mounted on steel frames.

iii) Rotating cable drums should be provided for:

- HV cable drum-50m
- Mains cable drum-50m
- Earthing cable drum-50m
- Auxiliary earthing drum-50m
- R.F. cable drum-50m

iv) Safety screens be provided to isolate the HV area from operating area.

v) Suitable cupboards and tables for storing hand held instruments, writing desk.

vi) Revolving chair for operator and sitting arrangement of 4 persons.

vii) Diesel driven van with conditioning.

viii) Fully carpeted side walls & roof for Electrostatic Protection.

ix) Fully Insulated floor for safety .

5.0 <u>Gen-set</u>

The gen-set shall meet the below mentioned specifications. & has to be placed at specially created housing in the van body / side body of the van.

Rated Output	5.6 KVA
Maximum Output	6.5 KVA
Rated Voltage	220 Volts
Frequency	50 Hz
Fuel	Petrol / 3 Ltr Per Hour
Starting	Self Start by key
Oil Alert	Provided

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AVR	Automatic Voltage Regulation
Frame	Pipe Full Frame
Battery	Extra
Dimension (LxWxH) mm	708 x 548 x 493
Weight (Dry)	78 Kgs approx

Preferred make : HONDA/TOSHIBA

5.0 Specifications for Fabrication of CABLE FAULT LOCATING VAN ON TATA 407/TEMPO Traveler or equivalent vehicle.

1.Body Structure :

The structure shall be made of steel sections as mentioned below & 12 mm thick Blata Packing with anti vibration (Reinforced Rubberized Flat Section) over chassis frame:

(i) Runner / Strengthening member – MS Channel 100x50x5mm

(j) Cross Member - MS Channel 75x40x4mm

(k) Floor frame - MS Angle 40x40x5mm

(l) Super Structure (Hoop Sticks) - Top Flat section 40x40x2.5mm/ MS Square Tube 40x40x2mm

(m) Super Structure(Roof Curvature/ Taper & Flat surface) - Top Flat Section 40x40x2.5mm MS Square Tube 40x40x2mm

(n) Entire structure , spring Leaf Floor Angles are to be anti-corrosive treatment And paints .

(o) TATA 407 should be in one cabin.

(p) Rear End is to be provided with red reflectors.

(q) Mud Guards are to be provided.

(r) Ballata Packing (Rubber Packing between Chassis & body).

(s) Stairs should be with aluminum checkered plate.

(t) Lock Should be of good quality(Godrej with OEM certificate)

2. PANNELLING :

a) External - 18SWG G.L Sheet

b) Roof - 20SWG G.L.Sheet

c) Internal - Carpeting Over 3mm Fly.

3. INSULATION :

All Walls and roof will be insulated with 40mm thick Thermocoal Sheet.

- Fully Carpeted side Walls & Roof for Electrostatic protection

4. FLOORING :

Base of Floor - Water Proof Ply 12mm thick Screwed through base floor Of 3/6 mm MS .Sheet welded to floor frame.

Upper Layer - Vinyl Floor Sheet 2mm thick fixed over fly.

5. DOORS:

a) Hinged type doors(Double leaf inside collapsible) shall be provided for Main Compartment.

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b) Hinged Type outside open able (Ambulance type) rear doors

c) Rear door to be provided with cable cutout section (6"x6")

6. WINDOWS:

Adequate size of windows two way horizontal full sliding glass of 5mm thick Toughened glass encased in Aluminum Sections slide on Aluminum 'Z' Section in crew compartment. The window shall have including robust type locking arrangement from inside. In equipment portion both sides shall have fixed Window. All glass windows should be covered with removable metal frame with metal net.(Should be Protected from Stone)

7. ELECTRICAL FITMENTS:

a) 05 Nos. Light and 02 Nos. Light Battery Operated.

b) Fan (3 nos.)

c) Tube Lights and Fans should be mount such that its frame should not be touch or isolated from vehicle body.

8. PAINTING :

Complete body of the Van will be Painted OFF WHITE colour With P.U. Paint after surface treatment.

9. OTHERS :

Van will be fabricated as per standard fabrication practice and Specifications confirming to All India Motors Vehicles Act. Provisions of Standards Fitment will be kept such as First Aid Box, Fire Extinguishers, Rear Bumpers , Stephney, Cradle , Tool Box, Rear View Mirrors etc.

10. Guarantee (For VAN)

Notwithstanding to that specified in this specification, the supplier is responsible to provide all necessary component for satisfactory working of the system in locating the fault in the cable. The VAN should be guarantee as per the manufacturer's specifications. The supplier shall have to offer to JVVNL the same standard Guarantee card of the principal manufacturer of the Van. Registration of the van shall in the name of purchaser.

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2. Schedule of Completion

The completion of various activities of the tender are required to be done as per the following schedule

S. No	Particular of activity	Time schedule desired
1	Commencement of supply	Within 90 days from the date of work order
2.	Completion of supply	Within 150 days from the date of work order

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Techno commercial and General Details

TECHNICAL OFFER & GENERAL DETAILS SECTION – 4 PART – A

Part A of the proposal shall have the following:

1. Cover letter (To be submitted on the letter Head of the bidder)
2. Annexure 1 to 8
3. Schedules 1 to 7
4. Bill of Material along with the make and specification
5. Manufacturer's Authorization Form (MAF)
6. Details of mandatory certificate & proof thereof

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TECHNICAL OFFER TO BE FURNISHED BY THE BIDDER ON THE COVER LETTER

To be submitted complete with all enclosures.

The Superintending Engineer [IT & CRP]
Jaipur Vidyut Vitran Nigam Limited
Old Power House Premises
Near Ram Mandir
Jaipur-302 006

SUB: To supply 2 No. Fully Automatic & 4 No. Semi-Automatic Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV

Dear Sir,

We have procured tender specification TN 22: To supply 2 No. Special Purpose & 4 No. General Purpose Mini-Truck/ Van Mounted Single Phase Modular Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV

We agree to supply and install the items as per the schedule given in the tender specifications

We also agree that:

1. The prices as mentioned in "Financial offer (furnished in separate envelope under the cover "Price Bid")" are firm in all respect

2. The prices quoted are valid for a period of 120 days from the date of opening of "Techno-Commercial bids" or 60 days from the date of opening of "Price Bids" whichever is later

3. The quoted / agreed prices are inclusive of the following charges:
- Enclose details of taxes included in the prices

4. We also understand that the quantities mentioned in the price schedule shall be meant for bid evaluation, however payment shall be made us on the basis of actual number of items supplied / service delivered.

5. We have noted the standard terms of payment and undertake to abide by the same.

6. We understand that conditional offers are likely to be rejected

7. The execution of work shall strictly be in accordance with work completion schedule as given by us. In case we fail to complete the work as indicated therein we shall pay penalty as per "Delay in Completion" clause of the specification.

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8. The material supplied by us shall conform your specification

9. We confirm that we agree to adhere to all the commercial terms and conditions as well as the technical stipulation of your specification and there is no deviation. Such acceptance has also been confirmed in prescribed schedules.

10. We confirm that we are qualified for bidding in terms of Qualification Requirements specified in the bidding documents and have submitted the requisite qualification Certificate & data / documents with the bid.

11. Until a formal contract is prepared and executed, this together with your written acceptance thereof in your notification of award shall constitute a binding contract between us.

12. We understand that the quantity mentioned in the financial schedule is just for evaluation purpose

We understand that JVVNL reserves the right to invite detailed proposals from any private entrepreneur-company; irrespective of the fact whether the company or entrepreneur has been pre-qualified.

We also understand that the JVVNL reserves the right to reject any or all of the bids without assigning any reason thereof.

We agree to abide by all the conditions governing the proposals and decisions of the JVVNL.

Enclosed:

1. Annexure 1 : General profile of the bidder
2. Annexure 2 : Collaboration / Consortium / JV details
3. Annexure 3 : Organizational Capabilities
4. Annexure 4 : Financial Details
5. Annexure 5 : Experience summary
6. Annexure 6 : Proposed System
7. Annexure 7 : Details of guaranteed Technical Particular
8. Schedule of completion
9. Schedule 1: Schedule of deviations
10. Schedule 2: Confirmation of "No deviation" in commercial terms and conditions of this tender

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11. Schedule 3: Confirmation of "No deviation" in technical terms and conditions of this tender
12. Schedule 4: Supporting documents to substantiate meeting of QR
13. Schedule 5: Experience summary
14. Schedule 6 : Schedule of Completion.
15. Schedule 7 : Check List.
16. Manufacturer Authorization Form (MAF) on the letter head of OEM

Thanking you,

Yours faithfully,

_____

Designation_____

Date:
Place:

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Annexure – 1: General Profile of the bidder

Kindly attach a copy of latest RoC for all the members of the consortium to substantiate the information furnished against general profile of the bidder

Details	Responses
Full legal name of the bidder	
Year of establishment	
Registered Office Address	
Address for Correspondence	
Telegraphic Address	
Authorized person(s) to be contacted	
Telephone number(s)	
Email id	
Fax number	
Names and Addresses of the Proprietors/ Partners/Consortium Members	
Type of the firm Private limited/Public limited/Government sector /other	
Whether registered under companies act or any other act	
Registration Number & Date	

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Annexure – 2: Collaboration / Consortium / JV details

Particulars	Responses
Details of collaboration or consortium arrangement envisaged, if any, with a copy of agreement on non judicial stamp paper of appropriate value	
Name & address of Collaborators, Licensers or Consortium or consortium Member	
Period of collaboration envisaged	
Details of involvement and responsibility of Collaborator or each consortium member	

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Annexure – 3: Organizational Capabilities

Particulars	**Responses**
Total number of permanent employees in the firm	
The bidder has more than 25 permanent employees with skill on facilities management on the payroll of the firm for at least 1 year in past 36 months.	Your response in Yes or No
Field organization and resources to be deployed for the proposed job	
Qualification and experience of personnel at different levels to be deployed for the proposed job	
Details of the consultants if employed for the proposed job	

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Annexure – 4: Financial Details

S. No	Particulars	Response
1	Turnover FY 07 -08 in INR	
2	Turnover FY 06 -07 in INR	
3	Turnover FY 05 -06 in INR	
4	Total Turnover 05 to 08 in INR	

Enclose audited BS of the aforementioned FYs

Kindly refer to turnover (as mentioned in Section III Part II Pre Qualification Requirements) point no V Turnover requirements

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Annexure – 5: Experience Summary

Particulars	Experience
Give detailed write-up on experience / order executed for cable fault locating system, training facility management etc; with supporting papers	Write name of the clients here
Mention type of the cable fault locating supplied	
Enclose copies of order so executed/orders in hand	

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Annexure – 6: Details of quoted system(s)

S. No	Particulars	Brand name / product name	Product number / specification number	Compliances of Mandatory Certification
		2	**3**	**4**
1.	Special purpose cable fault locating system			YES/NO
2.	General Purpose cable fault locating system			YES/NO
3.	Digital Multi-meter			YES/NO
4.	Megger			YES/NO

Note : The bidder is required to furnish single brand / product no. in column no. 2 & 3. In case of alternatives furnished by the bidder JVVNL reserves the right to select any brand / product no. from the alternatives given by the bidder on the quoted rates.

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Annexure – 7 : Details of guaranteed Technical Particulars

The supplier shall fill all the columns of the GTPs and shall submit the same along with the tender. The tenders without GTPs shall be out rightly rejected.

A. GUARANTEED TECHNICAL PARTICULARS FOR SPECIAL PURPOSE PORTABLE CABLE FAULT LOCATING EQUIPMENT & VAN :

S. No.	Description	Technical Particulars Offered
1.	**Name & Address of the Manufacturer**	
2.	**Manufacturers'' Address of works**	
3.	**Control Unit**	Yes/No
	Integrated safety Circuitry monitoring	Yes/No
	Availability of Visual indication of failure due to safety feature	Yes/No
	Indication of Corrective measures in Graphical as well as alphanumeric value against the failure of safety feature	Yes/No
	Single Knob Operation for selection of sequence/ operation	Yes/No
	Constant Monitoring of all safety feature during operation	Yes/No
	Availability of emergency off switch with the operator at the cable termination (under test) to avoid any eventuality due to unauthorized operation of HV supply to cable under test.	Yes/No
	Mains Power supply requirement	
4.	**DC High Voltage Testing Unit :**	
	Ranges :	
	0-40 KV	
	Indication of Voltage value by Hold function for Voltage breakdown value on Screen even after breakdown	
	Leakage current indication	
5.	**Integrated Burn Unit :**	
	DC Voltage	
	Current	
6.	**Fault Pin-Pointing Set :**	
	Battery Operated	

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	Portable	
	Weight	
	LCD Display of both Magnetic field and acoustic field	
	Bar Graphical display of magnetic field and acoustic field	
	Measuring functions: a) Proximity Indication b) Coincidence measurement c) Measurement of magnetic field strength of pulse current. d) Indicating the signals of both sensors simultaneously. e) Indication of proximity of the sensor and the fault resulting from the difference in time taken by the acoustic and magnetic signal.	
7.	**Cable Route Tracer :**	
	Transmitter :	
	Output watts	
	Output Frequency	
	Are frequencies independent of line frequency 50Hz.	
	Resistive load matching: manual and automatic	
	Receiver :	
	Tunable to Frequencies of the transmitter	
	Tunable to line frequency	
	Weight	
8.	**Cable Identification Kit :**	
	AF Transmitter :	
	Current Rating	
	Voltage Rating	
	AF Receiver :	
	Ranges of sensitivity 4 ranges; each continuously adjustable Meter $\pm$ 50 μA	
9.	**VLF TEST SET :**	
	Output Voltage (RMS)	
	Cosine/sine square wave technology	
	Frequency	

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	Capacitance	
	Internally Powered	
	Is it operable via the control unit single knob	
10.	**Microprocessor based transient recorder :**	
	Modes Pulse reflection Mode Impulse Current Mode Are Reflection Mode Decay Mode	
	Measuring range	
	Accuracy	
	Integrated control unit monitor screen and operable via single knob on control unit	
11.	**Surge Generator :**	
	Ranges: vendor to specify Energy in Joules against each range below a) 0-4 kV b) 0-8 kV c) 0-16 kV d) 0-32 kV	
	Is the amount of energy dissipated with the output voltage should be displayed on the screen of the control unit ?	
	Is the unit should be operable through single knob on the control unit ?	
	Do all functions like sequence selection, KV selection etc should be via the integrated control unit?	
	Is Surge rate to be operable through the control unit ?	
12.	**Murray loop bridge :**	
	Type and size of unit	
	The bridge supply voltage	
	Is the Fault Distance shall be displayed on the Unit ?	
	Method of Bridge Balance Indication ?	
	Features to be provided for adjustment to obtain the null point balance?	
	Is the Unit shall be provided with a fuse check LED indication for Bridge Potentiometer?	
	The Inherent Basic Uncertainty of the Unit.	
	Is the unit to be battery operated?	

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	Is the unit provided with 20 KV accessories?	
13.	**Sheath fault locator :**	
	Output voltage	
	Output current	
14.	**Details of the cable drum(Type & Length)**	
	HV Cable drum	
	Mains Cable drum	
	Earthing Cable drum	
	Auxiliary Cable drum	
	RF cable Drum	
15.	**Accessories Provided with Equipment:**	
	Discharging Rods	
	Measuring Wheel	
	Operator Cabin Fan	
	Earth Spikes	
	Digital Multi-meter make	
	Megger 0-10 KV make	
	Set of spanners, screwdrivers etc.	
	Any other tool not mentioned above but otherwise required should also be supplied.	
16.	**ASSOCIATED SOFTWARE :**	
	Type and make of software	
17.	**GENSET :**	
	Make :	
	Rated Output	
	Maximum Output	
	Rated Voltage	
	Frequency	
	Fuel	
	Starting	
	Dimension	
	Weight	
18.	**VAN :**	
	Make :	

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	Model No.	
	Complete Details / Specifications of Mobile Van, including Make, Model no., engine capacity, Complaint to Euro Norms or not etc.	
19.	**SAFETY MODULE :**	
	Constant monitoring of all safety circuits such as earth monitoring circuit etc. should be inbuilt into the control unit, safety interlock monitoring etc.	
20.	**Mounting Van for the Comprehensive Set:**	
	All the Units of the Comprehensive Van Mounted Multifunctional Cable Fault Locator system consisting of Cable Fault conditioning (burn-down), Pre-Location, Route Location, Pin-pointing & Testing of HT & LT cables shall be mounted on a suitable Equipment Mounting van with Power Supply connection arrangement fitted with at least four heavy duty wheels and one hook at the front for facilitating transportation by means of a vehicle.	
21.	Any other details	

(Seal & Signatures of the tendrer)

B : SCHEDULE OF GUARANTEED TECHNICAL PARTICULARS FOR GENERAL PURPOSE PORTABLE CABLE FAULT LOCATING EQUIPMENT & VAN :

S.NO.	Description	Technical Particulars Offered
1.	**Name & Address of the Manufacturer**	
2.	**Manufacturers'' Address of works**	
3.	**Digital Fault Locator :**	
	Make	
	Model	
	Mains Supply	
	Sampling Rate of built in transient recorder	
	Does the unit automatically mark and display the fault point with distance provided in KMs	
	Automatic Parameters setting	
	Does the equipment detect cable end automatically even when the cable length is not available	
	Operating Range in terms of KMs	
	No. of Records stored with all the parameters	
	Horizontal and vertical shifting of displayed waveforms	
	Gain selection and enlargement facility without loss of	

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	resolution and accuracy	
	Fault Location methods offered	
	Facility to connect printer directly	
	Does the equipment perform self test at start up?	
	TFT screen display size	
	Accuracy	
	Out-put voltage of the transmitting pulse	
	Pulse width	
	Output impedance	
	Resolution	
	Propagation Velocity	
4.	**SURGE GENERATOR**	
	Make	
	Model No.	
	Output voltage continuously variable in each range	
	Surge Energy A. 0-4KV B. 0-8 KV C. 0-16 KV D. 0-32 KV	
	Surge Energy with internally mounted capacitors	
	Output pulse for automatic surging	
	Facility for single shot	
	H.V. zero interlock	
	Short circuit protection by internal current limitation	
	Voltage Indication	
	Current measurement	
	Built-in automatic discharge device	
	Safety precaution	
5.	**DC High Voltage Testing Unit**	
	Make	
	Model	
	Mains supply	
	Leakage current	
	Insulation Test	
	Output voltage (DC Testing) 0-40 KV	
	Safety features such protection against high voltage, auto discharge after switching off, high voltage On/OFF with security, Auto-OFF in case of break in power supply etc. (Please mention)	
6.	**PIN-POINTING SET**	
	Make	
	Model No.	

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	Battery operated	
	Portable	
	Can pinpointing set be used with the surge generator for pinpointing acoustic disturbances created by dissipation of energy from surge generator at the fault ?	
	Does the equipment indicate acoustic disturbances to the operator both audibly on the head phones and visually on a display meter?	
	Is the unit able to measure acoustic propagation time wherein time difference between magnetic pulse and acoustic pulse can be measured and evaluated?	
	Does the instrument offered incorporate a magnetic detector with separate amplifier?	
	Weight of receiver with integrated batteries	
	Does the unit switch off automatically incase of disconnection from the ground microphone	
	Is the unit provided with the suitable ground microphone, which can filter out noise for accurate fault pin-pointing?	
	Is the unit equipped with the LCD display of both magnetic field and acoustic field.	
	Does the unit indicate proximity to the fault	
7.	**ROUTE TRACING UNIT :**	
	Make	
	Model	
	Audio Frequency Generator :	
	Operating Frequency	
	Indicators	
	Load matching	
	Output Power	
	In mains and battery operations	
	Battery	
	Audio Frequency Reciver :	
	Operating Frequency	
	Indicators	
	Signal Strength	
	Dynamic Range	
	Battery	
	Dimension	
	Weight	
8.	**CABLE IDENTIFICATION SET :**	
	Make	
	Model No.	
	Transmitter :	
	Output Voltage	

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	Output Current	
	Power supply	
	Receiver :	
	Display	
	Sensitivity	
9.	**FAULT CONDITIONING / FAULT BURNING UNIT :**	
	Does the machine has a feature for burning down the high resistance faults in the cable to facilitate the fault pre-location .	
	Voltage Range	
	Current Range	
	Is Unit is provided with applied voltage & fault discharge current meters?	
	Is Safety features such as Thermal Overload protection, auto-reset, protective terminals to prevent accidental contact & earthing facility ?	
10.	**CABLES :**	
	Are the cables required for operation of cable testing system mounted on drums with taken out facility.	
	Is the cable drum provided with screw terminal for protective earth connection with a monitoring switch so that putting into operation of the system is only possible when the protective earth lead is connected on system side?	
	Length of EARTHING CABLE	
	Size & type.	
	Is the earthing cable equipped with tapping ferrules every 3m over the complete length.	
	Length of POWER SUPPLY CABLE	
	Size & Type	
	Length of HV CABLE	
	Type & Size of Cable	
	Is the lead suitable for an operating voltage up to 80 KV DC?	
	Type of insulation	
11.	**Details of the cable drum(Type & Length)**	
	HV Cable drum	
	Mains Cable drum	
	Earthing Cable drum	
	Auxiliary Cable drum	
	RF cable Drum	
12.	**Accessories Provided with Equipment:**	
	Discharging Rods	
	Measuring Wheel	
	Operator Cabin Fan	

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	Earth Spikes	
	Digital Multi-meter make	
	Megger 0-10 KV make	
	Set of spanners, screwdrivers etc.	
	Any other tool not mentioned above but otherwise required should also be supplied.	
13.	**Type of Vehicle and Mounting arrangements Van**	
	Make	
	Model	
	Mounting :	
	All the equipments should be mounted on steel frames modular racks.	
	Rotating cable drums should be provided for all the cable	
	Safety screens are to be provided to isolate the HV area from operating area.	
	Revolving chair for operator and	
	Sitting arrangements	
	Covering of van and flush door from backside.	
	Any other information, if any.	
14.	**GENSET :**	
	Make :	
	Rated Output	
	Maximum Output	
	Rated Voltage	
	Frequency	
	Fuel	
	Starting	
	Dimension	
	Weight	
15.	**SAFETY MODULE :**	
	Constant monitoring of all safety circuits such as earth monitoring circuit etc. should be inbuilt into the control unit, safety interlock monitoring etc.	
16.	**Mounting Van for the Comprehensive Set:**	
	All the Units of the Comprehensive Van Mounted Multifunctional Cable Fault Locator system consisting of Cable Fault conditioning (burn-down), Pre-Location, Route Location, Pin-pointing & Testing of HT & LT cables shall be mounted on a suitable Equipment Mounting van with Power Supply connection arrangement fitted with at least four heavy duty wheels and one hook at the front for facilitating transportation by means of a vehicle.	
17.	Any Other detail	

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(Seal & Signatures of the tendrer)

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Schedule – 1: Schedule of deviations

Technical Deviations

S. No	JVVNL'S specification clause	Deviation sought by the bidder
1		
2		
3		
4		
5		
6		
7		
8		

Commercial Deviations

S. No	JVVNL'S specification clause	Deviation sought by the bidder
1		
2		
3		
4		
5		
6		
7		
8		

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Schedule – 2: Confirmation of "No deviation" in commercial terms and conditions of this tender

Commercial Terms & Conditions

Bidder's Name & Address:

To

The Superintending Engineer (IT&CRP)

Jaipur Vidyut Vitran Nigam Limited

Old Power House, Bani Park

Jaipur – 302006

Dear Sirs,

Sub: Confirmation for "No Deviation" in Commercial terms & conditions of package No. JPD/SE/IT&CRP/ TN 22

We hereby confirm that there is no deviation in commercial terms & conditions stipulated in the bidding documents and we agree to adhere the same strictly.

(Signature)…….....

Date :

Place :

(Name).....

(Designation).....

(Common Seal).....

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Schedule – 3: Confirmation of "No deviation" in technical terms and conditions of this tender

Technical Terms & Conditions

Bidder's Name & Address:

To

The Superintending Engineer (IT&CRP)

Jaipur Vidyut Vitran Nigam Limited

Old Power House, Bani Park

Jaipur – 302006

Dear Sirs,

Sub: Confirmation for "No Deviation" in Technical terms & conditions of package No. JPD/SE/IT&CRP/ TN 22

We hereby confirm that there is no deviation in technical terms & conditions stipulated in the bidding documents and we agree to adhere the same strictly.

We also confirm that tendered material shall be procured from vendors approved by JVVNL and shall be conforming to various requirements of relevant Specification /orders and as per design and drawing approved by the Nigam.

(Signature)…….....

Date :

Place : (Name).....

(Designation).....

(Common Seal).....

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Schedule – 4: Supporting documents to substantiate meeting of QR

Bidder's Name & Address:

To

The Superintending Engineer (IT&CRP)

Jaipur Vidyut Vitran Nigam Limited

Old Power House, Bani Park

Jaipur – 302006

Dear Sirs,

We hereby declare that we are qualified for bidding in reference to "Qualification Requirements" of the bidding documents and submit the following certificate(s) /documents in support of the above :-

1.

2.

3.

Note: Furnishing of certificate of a registered Chartered Accountant certifying fulfillment of specified qualification requirements is essential.

(Signature)…….....

Date :

Place :

(Name).....

(Designation).....

(Common Seal).....

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Schedule – 5: Experience Summary

Bidder's Name & Address:

To

The Superintending Engineer (IT&CRP)
Jaipur Vidyut Vitran Nigam Limited
Old Power House, Bani Park
Jaipur – 302006

Dear Sirs,

We have completed /executed the orders as per details given hereunder:-

S. No.	Details of ordered work	Order No. & Date	Name & details of ordering utility	Date of commencement
1	2	3	4	5

Date of completion	Contract value of ordered/executed work	Whether order executed as per stipulated work completion schedule or not	Remarks
6	7	8	9

Note: Certificate(s) of competent authority of the utility for satisfactory execution of stated works are to be furnished along-with this schedule.

(Signature)…….....

Date :

Place :

(Name).....

(Designation).....

(Common Seal).....

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Schedule – 6: Schedule of Completion

S. No	Particular of activity	Time schedule desired	Time Schedule quoted
1	Commencement of supply	Within 90 days from the date of work order	
2.	Completion of supply	Within 150 days from the date of work order	

(Signature)…….....

Date :

Place :

(Name).....

(Designation).....

(Common Seal).....

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Schedule 7: Check list

S. No	PQR	Yes / No
1.	Is the cover letter attached with the bid proposal	
2.	Is annexure 1 completed and enclosed with the bid proposal	
3.	Is annexure 2 completed and enclosed with the bid proposal	
4.	Is annexure 3 completed and enclosed with the bid proposal	
5.	Is annexure 4 completed and enclosed with the bid proposal	
6.	Is annexure 5 completed and enclosed with the bid proposal	
7.	Is annexure 6 completed and enclosed with the bid proposal	
8.	Is annexure 7 completed and enclosed with the bid proposal	
9.	Is schedule 1 completed and enclosed with the bid proposal	
10.	Is schedule 2 completed and enclosed with the bid proposal	
11.	Is schedule 3 completed and enclosed with the bid proposal	
12.	Is schedule 4 completed and enclosed with the bid proposal	
13.	Is schedule 5 completed and enclosed with the bid proposal	
14.	Is schedule 6 completed and enclosed with the bid proposal	
15.	Is schedule 7 completed and enclosed with the bid proposal	
16.	Is manufacturer authorization letter filled and attached with the bid proposal	
17.	Does the bid proposal contains the part B that is the financial proposal in a sealed envelope	
18.	Is financial offer enclosed in Envelope 3 that is duly sealed and super-scribed as provided in tender document	
19.	Has the bidder submitted EMD of Rs 9 Lacs in cash or DD in favor of A.O (TW), JVVNL	
20.	Has the bidder furnished original bank solvency / credit worthiness certificate from any scheduled bank for execution of a project worth Rs. 5Crores. In case of consortium, does the lead member meet 50% requirement of bank solvency / credit worthiness	

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S. No	PQR	Yes / No
21.	Is EMD enclosed in Envelope 1 that is duly sealed and supersribed as provided in tender document	
22.	Has the bidder provided details on the field offices that would be established to undertake the proposed work	
23.	Has the bidder provided project organization structure	
24.	Has the bidder provided names of the key resources that would be deployed along with their proposed position	
25.	Has the bidder provided CVs of the proposed key resources	
26.	Has the bidder provided project plan (in form of a Gantt Chart)	
27.	Has the bidder provided schematic flow of information	
28.	Has the bidder provided a photocopy of the tender specification document along with the bid proposal	
29.	IS techno commercial proposal enclosed in Envelope No 2 that is duly sealed and super-scribed as provided in tender document	
30.	Are all the pages of the proposal signed by an authorized representative of the bidder's firm (in case of consortium, then from the leading member's firm)	
31.	Does the bid contains the name, address and place of business of the person or persons making the bid and is the bid signed and sealed by the bidder under his usual signature.	
32.	Is satisfactory evidence of authority of the person signing on behalf of the Bidder furnished with the bid	
33.	Is the bidder's name stated on the proposal same as that of the legal name of the firm	
34.	Do any / all erasures or other changes in the bid documents bear the initials of the person signing the bid	
35.	Are all entries and amendments also signed	
36.	Are all pages of the attached tender specification document signed on all the pages, as a token of acceptance of the terms and conditions, except those mentioned in the deviation list	
37.	Has the bidder arranged all insurance as may be pertinent to the works and obligatory in terms of law to protect its interest and interest of the JVVNL against all perils detailed herein	

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S. No	PQR	Yes / No
38.	Has the bidder obtained accident liability insurance for its employees for payment of compensation on account of injury, fatal or otherwise due to accident during course of operation carried out by him for the purpose of complying with his contractual obligations thereof and has a copy of the same submitted to JVVNL	
39.	Is the insurance obtained by the agency as per clause No 8 is in the joint names of the JVVNL and the agency so that the JVVNL and the agency are covered for the entire period of contract from the commencement of the contract and shall remain valid up to 30 days from the date of handing over all the works completed in all respects JVVNL.	
40.	Has the bidder stated in his tender the places of manufacture testing and inspection of various equipments offered by the bidder	
41.	Has the bidder furnished original / photo state copies of the latest type test certificate from any recognized Government Laboratory for all the type tests wherever prescribed in the relevant latest addition of ISS (as applicable) along with the bid proposal	
42.	Has the bidder furnished an undertaking along with the bid proposal that the bidder will depute trained and experienced personnel for this project if the project is awarded to the bidder	
43.	Is proposal (Techno commercial and financial) hard bound in the manner as mentioned in the tender document	
44.	If the proposal is submitted by a consortium / JV then does the lead member meets all the qualification criteria mentioned for the lead member	
45.	Is the proposal is submitted by a consortium then does the total number of companies in the consortium greater than two	
46.	In case of a consortium, is the original consortium agreement on non – judicial stamp paper of appropriate stamp value submitted along with the proposal and is the consortium signed by sub divisional magistrate	
47.	Does the consortium / JV agreement mention the names of all the participating members	
48.	Does the consortium / JV agreement mention the name of the lead member	
49.	Does the JV / consortium agreement mentions the power of attorney in favor of the lead member duly signed by legally authorized signatories of all the participating members and is the same submitted separately	
50.	Is the lead member authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the Joint Venture / Consortium and to do the entire execution of the contract	

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S. No	PQR	Yes / No
	including payment exclusively by the lead member	
51.	Is any member of the JV / Consortium participating in the same tender with another bidder	
52.	Does the bidder **(the lead member in case of consortium)** posses a valid ISO 9001:2000 for Facility management and is the same enclosed with the bid proposal	
53.	Experience	
54.	Turn over	
55.	Is the bidder (lead member in case of a consortium) established in the business since last 5 years and is the registration certificate submitted with the bid proposal	
56.	Are all three envelopes put in the fourth (larger) envelop and sealed and super -scribed as provided in the tender document	
57.	Any other information bidder like to furnish	

(Signature)…….....

Date :

Place :

(Name).....

(Designation).....

(Common Seal).....

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Financial Offer: Guiding Note

JAIPUR VIDYUT VITRAN NIGAM LIMITED

IT &CRP CIRCLE

TENDER SPECIFICATION NO. TN 22

SECTION-IV-PART-B

NOTE: BIDDER IS REQUIRED TO READ CAREFULLY THE FOLLOWING BEFORE QUOTING THE PRICES

I. The format enclosed herewith is to be used to quote the price. No other format shall be used.

II. The price bid in the other formats may be rejected.

III. All the prices quoted must be in Indian National Rupees only. Prices quoted in any other currency will not be considered.

IV. No cover letter is required to be enclosed with the price bid.

V. The total quoted price should be inclusive of all taxes and duties as per the prevailing taxes and duties with the details of applicable taxes. In case of any variation in taxes and duties or introduction of new taxes and duties/ statuary variations, the same will be in JVVNL account.

VI. The quoted price includes the expenditure towards Guarantee for five years and training expenses.

VII. Each page of financial bid is to be signed.

VIII. The brand and product specification are essentially required to be furnished by the bidder else offer will not be considered.

IX. In the event the enclosures, as requested, in the financial bid are not submitted by the bidder then the bid will be considered as non responsive.

X. **The charges as would be quoted by the tenderer for such extended guarantee contract for 5 years shall be loaded in the quoted prices of the main equipment to arrive at computed adjusted prices for comparison purpose and to award contract to most economical proposal, i.e. supply of equipment + extended guarantee cost involved for 5 years after expiry of normal guarantee period of 60 months from supply.**

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Financial Offer

JAIPUR VIDYUT VITRAN NIGAM LIMITED
IT &CRP CIRCLE
SECTION-IV-PART-B

The Superintending Engineer [IT & CRP]
Jaipur Vidyut Vitran Nigam Limited
Old Power House Premises
Near Ram Mandir
Jaipur-302 006

SUB: Supply of (i) 2 No. Special Purpose & (ii) 4 No. general Purpose Mini-Truck/ Van Mounted Single Phase Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV

Dear Sir,

We have procured tender specification No TN-22. We are submitting our financial proposals as under. All the prices quoted should be in Rupees only. The detailed quoted price in accordance with the specification is as under.

A. SUPPLY & INSTALLATION:

S. No	Particulars of Equipment	Tendered Qty.	Qty. Offered	Unit F.O.R. Destination Price inclusive of E.D with CESS, VAT, ST , Entry Tax and F&I (In Rs.)	Total F.O.R. destination Price (In Rs.)
1.	Supply of 2 No. Special Purpose Mini-Truck/Van Mounted Single Phase Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV	2 Nos.			
2.	Supply of 4 No. General Purpose Mini-Truck/Van Mounted Single Phase Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV	4 Nos.			

PRICE BREAK-UP OF 1 :

Description	Price (In Rs.)
Unit Ex-works Price	
Excise Duty @ & cess @ on Excise Duty	
CST/VAT @	
ENTRY TAX @	
Any Other Tax Applicable	
Packaging & Forwarding Charges	
Freight & Insurance per Unit	
Total Unit FOR Destination Price of Fault Locating Machine	

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PRICE BREAK-UP OF 2 :

Description	**Price (In Rs.)**
Unit Ex-works Price	
Excise Duty @ & cess @ on Excise Duty	
CST/VAT @	
ENTRY TAX @	
Any Other Tax Applicable	
Packaging & Forwarding Charges	
Freight & Insurance per Unit	
Total Unit FOR Destination Price of Fault Locating Machine	

B: EXTENDED GUARANTEE CHARGES: (to be filled in by the tenderer)

S. No	**Particulars of Equipment**	**Tendered Qty.**	**Unit Price (Rs.) including Service Tax and any other Tax applicable**	**Total Price (Rs.)**
1.	Supply of 2 No. Special Purpose Mini-Truck/Van Mounted Single Phase Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV	2 Nos.		
A	Extended guarantee charges for 1st Year			
B	Extended guarantee charges for 2nd Year			
C	Extended guarantee charges for 3rd Year			
D	Extended guarantee charges for 4th Year			
E	Extended guarantee charges for 5th Year			
	TOTAL			
2.	Supply of 4 No. General Purpose Mini-Truck/Van Mounted Single Phase Cable Fault Locating Equipment suitable for locating fault on low /medium / high voltage power cables up to 33 KV	4 Nos.		
A	Extended guarantee charges for 1st Year			
B	Extended guarantee charges for 2nd Year			
C	Extended guarantee charges for 3rd Year			

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D	Extended guarantee charges for 4st Year			
E	Extended guarantee charges for 5th Year			
	TOTAL			

(Signature)…….....

Date :
Place :

(Name).....
(Designation).....
(Common Seal).....

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